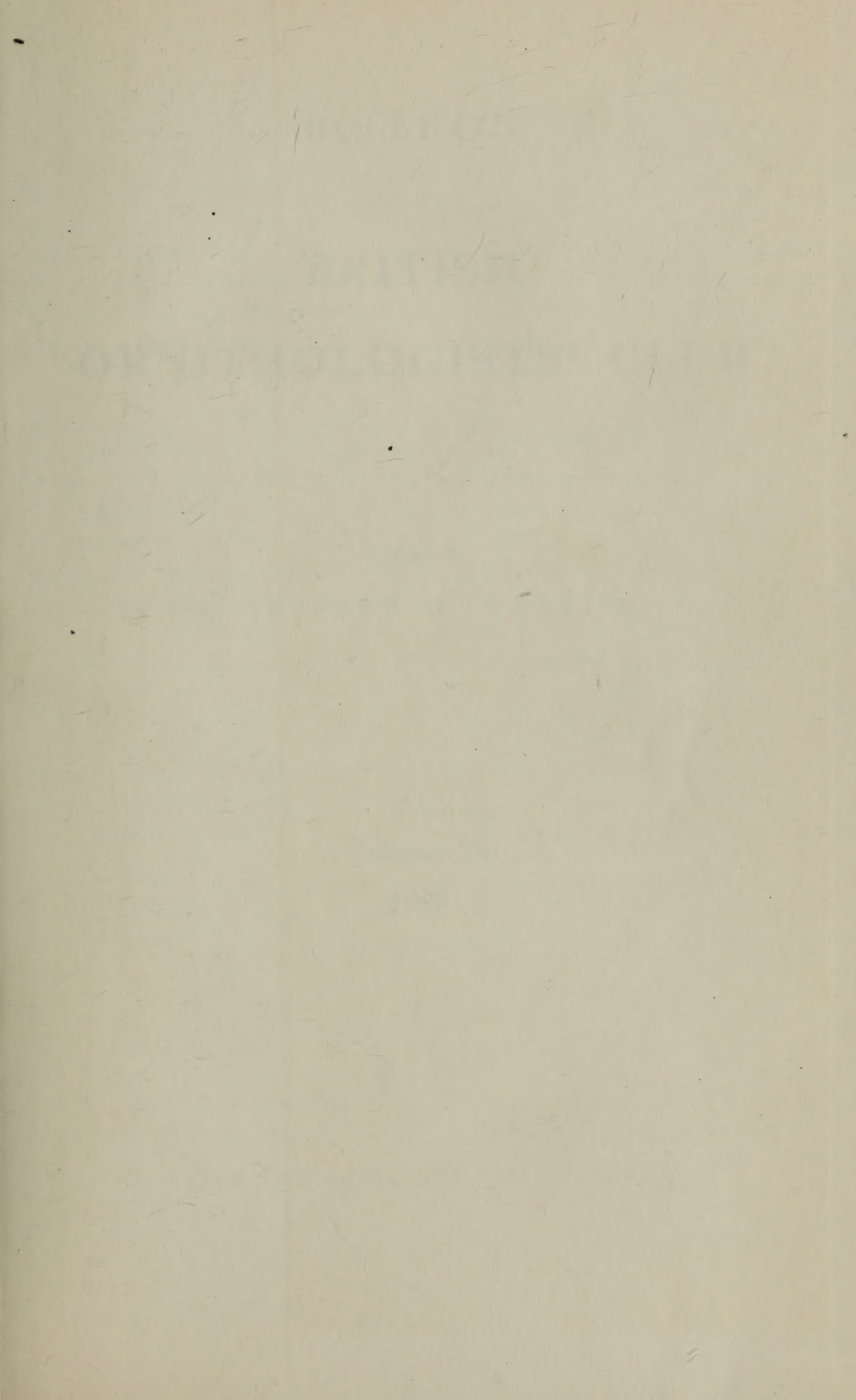




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BULLETIN
OF THE
BRITISH
ORNITHOLOGISTS' CLUB

EDITED BY

DR. JEFFERY G. HARRISON

Volume 78

1958



PRICE TWO SHILLINGS AND SIXPENCE

PREFACE

ALTHOUGH THE present volume with 166 pages is the largest since the war, the extra six pages over Volume 77 were exceptional, in that they were concerned with the new Trust Deed and therefore in size the present volume really remains the same for the third successive year. It is pleasing that the supply of papers continues to be excellent and further new contributors have supported us. The trend this year has been for rather longer papers, but short notes are a great help to the Editor in completing a 16 or 20 page issue without leaving part of the last page blank, which not only looks unpleasant, but costs the same as if it were filled.

The need for economy is more pressing than ever now that the Inland Revenue have withheld our rebate on the Deeds of Covenant, the result of which will be that our expenditure will exceed our income. One way in which a saving might be made is in the Author's Corrections. While it is appreciated that in a scientific paper the greatest accuracy is essential, it may not be realised that to alter or delete one word costs 3s. 6d.; to insert one word which may cause overrunning for several lines, can cost up to 12s. 6d. for about six lines. In 1958 such corrections cost the Club £18 16s. 3d. The co-operation of all authors over this would be greatly appreciated.

Dr. L. Soulsby's paper on internal parasites of wildfowl was re-printed in full in the 9th Annual Report of the Wildfowl Trust by permission of our Committee. Summaries of many of the papers are now appearing regularly in *Biological Abstracts*. These are being prepared by Mr. Bryan Sage and his efforts are resulting in further publicity for the Bulletin.

Once again we are particularly indebted to Mr. C. N. Walter for preparing the List of Authors and the List of New Forms. I would also like to thank Mrs. B. P. Hall, Dr. James Harrison, Mr. C. W. Mackworth-Praed and Mr. N. J. P. Wadley for their help with this volume.

The numbers attending the meetings for 1958 were as follows:—Members of the Club, 275; Members of the B.O.U., 33; Guests, 87; Guests of the Club, Dr. M. Burton, Miss J. Burton, Mr. & Mrs. R. E. Darnton, Monsieur & Madame Olivier, Professor M. F. M. Meiklejohn, Captain G. K. Yeates, Major G. Pye-Smith and Mr. R. Spencer (twice). Total: 406.

JEFFERY HARRISON.

Sevenoaks, December, 1958.

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Edited by
DR. JEFFERY HARRISON

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The five hundred and sixty-first meeting of the Club was held at the Rembrandt Hotel, S.W.7, on Tuesday, 17th December, 1957, following a dinner at 6.30 p.m.

Chairman: MR. C. W. MACKWORTH-PRAED.

Guests: 11; Members present: 36; Guests of the Club: Mr. and Mrs. R. E. Moreau; Total 49.

A Symposium on the Pan-African Ornithological Conference was held and a full account will appear in a subsequent Bulletin.

Some Observations on the Migration through the Occidental Sahara

by SENOR JOSE A. VALVERDE

A talk given to the Club on November 19th, 1957

The Sahara extends across the wider zone of Africa and constitutes a barrier for the migrants which is not so impracticable as people generally think. I have noticed this in the three months I spent in the Spanish Sahara in 1955, when sent by the Instituto de Estudios Africanos to study the birds. Previous papers from Heim de Balsac and Kulleberg^{1, 2} have developed this idea, and I have given additional information³.

We know now that the Sahara is a great barrier for birds in two main zones, namely the Libyan desert and the central part of the occidental Sahara, in the Tanezruf and the Djuf. Thus, there are only three main ways across the Sahara: the Nile valley, the central line of oases, through the Igargar-Hoggar-Air-Sahel line, and the Atlantic Sahara. This paper deals with the latter.

The desert in the occidental or Atlantic Sahara is much narrower than anywhere else. A biotope composed of Mediterranean scrub descends south along the coast as far as the Cabo Bogador, on the parallel 26° N. Thus a bird in fall migration can cover a distance equal to half of the central Sahara without leaving a biotope suitable for it. This Mediterranean scrub consists of large, annular patches of "Schdari" (*Rhus oxyacantha*), a thorny scrub 3 to 5 meters high. These annular patches of vegetation, called "graras", extend in the sublitoral plains, some 25-50 km. inland, and are often so near to one another that they join. They are in some aspects similar to the argelian "dala" and they have a Mediterranean bird fauna with such characteristic species as *Alectoris barbara*, *Burhinus*

oedinemus, *Athene noctua*, *Galerida malabarica*, *Sylvia melanocephala*, *Pica pica* and others.

There is little doubt that where this sedentary Mediterranean fauna can nest and live all the year, migrants are also able to live without risk.

According to Monod⁴ the upper limit of the Sahel — a country bordering the south side of the Sahara and inhabited by no desert fauna — penetrates rather deeply to the north in the western Sahara. In fact, the limit between Sahara and Sahel comes nearly to the parallel 20° N. situated in northern Mauritania between Akjout and Atar. The distance separating the southern limit of the zone of "graras" from the north of the Sahel, that is to say the width of real desert country to be crossed by the birds, is only 650 to 700 km. We can compare it with the 1500 or 2000 km. previously supposed to be the trans-saharian crossing in the central desert. The distance is thus reduced to less than a third



Western and Central Sahara

Black—non desert country. Dots—Sub-sahelic zone with abundance of Acacia trees.

The interrupted line marks the northern limit of this tree (after M. Th. Monod)

Vertical lines—Sahara-steppe zone.

Also this zone of the occidental Sahara can hardly be considered as a desert. In a zone parallel to the coast and some 300–500 km. wide extending north-south through the whole width of the desert from the Atlas to the Sahel, there exists for a desert a dense vegetation of large Acacia trees and scrub, and low scrub of Salsolaceae. The Acacia grows in little woods along the dry rivers giving to the landscape an arboreal aspect, really sahelic in the southern half. A rather sahelic fauna, with *Eremopterix nigriceps*, ostrich and antelopes such as *Oryx algazel* and *Dama dama* live there. Non-desert mammals such as *Hyena* can be found everywhere. The abundant insect fauna permits the existence of considerable

bird life. Such species as *Lanius excubitor*, *Corvus ruficollis*, *Argya fulva*, *Hippolais pallida*, *Oenanthe deserti*, *Oenanthe moesta*, *Athene noctua* and others live there, some of them in great numbers. These birds are adapted to live on a very poor insect fauna indeed, but they can be taken as a test of the possibility of bird life there, on the assumption that where they can nest and remain all the year, non-desert birds can also find enough food to sustain them during their passage.

On the other hand, according to the mixed influences of Mediterranean and tropical-monzonic climates, there are two main seasons of active plant and insect proliferation in the occidental Sahara, which we may call "biological optima", corresponding to the rainy seasons. Rains fall regularly in October–November generating the seasonal vegetation of "hacheb" or "rbfa" and its associated insect fauna; sahelic birds such as ostriches profit from this biological optimum to nest. In mid-winter the Mediterranean winter climate has a marked effect; this produces a halt in growth. From March to May the spring rains afford another and more general increase in the number of insects and plants, which the rich desert and Mediterranean fauna profit by for nesting. This is the primary biological optimum.

While very little data is available concerning the fall migration through occidental Sahara, the observations on spring migration are fairly numerous (Heim de Balsac, Dorst and Pasteur, ourselves). We know now that migration starts in January and ends in July, with an accentuated peak in March–May. Thus most of the migrants crossing the desert will profit by the biological optimum in which insects swarm and desert fauna is breeding. Plenty of insects can be found everywhere in the desert and feeding activities are easy for the birds.

It seems that birds profit by all these favourable circumstances. Migration along the Atlantic Sahara is dense, much more so than that passing through central Sahara, as we know from Hartert and Geyr von Scheppenburg's papers, and denser also than has been stated by Spatz and Bird⁵⁻⁶ on the same Atlantic coast, at Villacisneros and Port Etien. These last observers were in two of the most lifeless spots of desert in the Atlantic Sahara, two corners rather far from the main migration route.

Such species as *Streptopelia turtur*, *Hirundo rustica*, *Chelidon urbica*, *Muscicapa striata*, *Muscicapa hypoleuca*, *Phylloscopus trochilas*, *Sylvia borin*, *Acrocephalus scirpaceus*, *Acrocephalus schoenobenius*, *Luscinia megarhyncha*, *Phoenicurus phoenicurus*, *Saxicola rubetra*, *Anthus trivialis*, and *Motacilla flava* were passing in great numbers in the spring of 1955. Though I have not paid any special attention to the migrant birds, my own work being an ecological one in which the tracks of chacals were as interesting as bird life, I can give some details that will prove the intensity of migration. Thus in a one hour observation, near the beach of Cabo Juby, on April 2nd, of a little bush of *Tamarix*, no more than three feet high, a Garden Warbler, a male Redstart and five Willow Warblers stopped for a moment while passing to the north. A little further, a lonely bush of *Limoniastrum* held on April 3rd a Nightingale, a male Redstart and three Willow Warblers. The little wood of *Tamarix* and the marsh of the Aium literally swarms with passerine birds in the first half of May. Some days Reed and Sedge Warblers were found by thousands, and hundreds of Willow and other Warblers could be seen every day.

Heim de Balsac and Kullemberg had shown that, as the coast line strikes west into the ocean, some birds such as Bee-eater, Lesser Kestrel and Storks fly in a straight line across the curve of the coast from Mauritania, leaving Villacisneros and Port Etien to the left. The coast there is also more bare of vegetation than the inner country, which has plenty of Acacia and scrubs, but it is nevertheless followed by birds. Thus some birds cross the desert on a very wide front. Swallows, for example, were seen on a front of at least 200 km. when I was motoring from Ausert to Villacisneros on 28th April. I counted on this day 53 Swallows flying north, singly or in small parties, and that was on a date on which migration was decreasing. An Army Major who rested "en panne" for three days near Aridal a few days before, told me that his only amusement in the attempt was to see the endless stream of Swallows passing north in low flight.

Some particular species such as the Turtle Dove must profit greatly from the favourable migration route provided by the Atlantic Sahara. This bird is known to pass in great numbers along the Portuguese coast in fall migration, and also to arrive in southern Spain from the Moroccan coast in spring. The Turtle Dove and Ortolan Bunting are also the only non-desert granivorous species that succeed in crossing the desert on regular migration. For the latter some facts seem to indicate that it feeds mostly upon insects during the migration. The Turtle Dove feeds on seeds and must drink some water for that. Turtle Doves in an emaciated condition have been taken at Villacisneros in fall migration, in the height of the dry desert season, but in spring all the birds I have seen and killed proved to be in a satisfactory condition. They were numerous in the "schdari" bush near the Aium in May. On 9th May I counted 28 in the four "graras" visited this day. As there are several thousands of graras in the country, extending from the Seguiat el Hamara to the Cap Bogador and they are all similar, we can assume that there were this day many thousands of Turtle Doves on passage. It is not surprising that Dorst and Pasteur met with them in countless numbers at the Draa. I think that Turtle Doves pass in one flight over the more desert like country between Mauritania and the Cap Bogador and stop for some days in the "graras" to feed on the seeds not yet dry that enables them to go without water for some time. Time will probably demonstrate that the occidental Sahara is the principal migratory route of this bird.

Spring migration proves thus to be dense, and — what must be more important — very easy for birds. The best proof for this seems to be that in three months stay in the Spanish Sahara I have found only three dead birds ; a Scops Owl, Grasshopper Warbler and a Whinchat, and I examined the ground carefully. The mortality was less than we would find in a European country, and was also very far from the high one that observers consider occurs in the central Sahara. In fact, birds pass the occidental desert "with their hands in their pockets."

I had previously thought that the occidental Sahara was a barren, lifeless country crossed by occasional birds that spent but a short time in feeding before flying quickly northwards ; and these birds were well prepared for the travelling with a thick layer of subcutaneous fat. Time proved that all this was erroneous. The birds I have obtained, perhaps a hundred, were not fat at all ; they were in the same condition in the Tropics

when birds had only just begun the journey, as in the Seguiat, 500 km. north. I have seen there nothing similar to the fatty birds which arrive in fall migration in Spain, prepared for the crossing of the desert, in a much more dry and difficult season, that perhaps does not coincide with the secondary biological optimum. I think that fatty reserves are not so necessary in spring.

Also, birds expend in spring some energy in activities that are not necessary for migration. Heim de Balsac stated that Swallows were singing during the passage. Great Reed Warblers arriving to the Aium in May keep a territory and sing all the day for some time before leaving the country. So do Rufous Warblers.

Birds may stop anywhere for some days. At Villacisneros which is not an attractive place for birds, Three Swallows roosted for ten days at the end of April on the arms of a lamp in an inhabited house. Every night the lady closed the door and every morning she opened it to let the birds out. At the Aium, Turtle Doves stop for several days in May. An Ortolan Bunting was seen for some days in the same place at Villacisneros. A Little Egret probably stayed there for a month. Really, the birds did not seem very pressed to leave the desert.

General conditions of life seem to be very different there during fall migration. The rainy season and biological optimum take place in October-November. Though we have but very poor notes on fall migration, I suppose many birds do pass before that date, thus suffering from the most dry and uncomfortable season of the desert. Fat reserves are necessary at this moment. A strong tail-wind perhaps helps the passage of diurnal migrants.

The facts I have described only apply to normal climatic conditions. When the winds from the east, some 45° centigrade hot and with a relative humidity under 10°, called "irifi" in the country, blow upon the occidental Sahara — and this happens irregularly every season, birds suffer for several days from extremely hard conditions of life. Migration is active in the first, preparatory days of relatively mild wind. In the peak of the storm migration stops and the birds that have found a refuge stay there. Others are driven by the strong winds across the coast and arrive in an exhausted condition in the Canary Islands, as I have been told by the meteorologists; this explains an observation by Bannerman on the Roque del Este⁸. At times Swallows and Storks arrive in great numbers on the coast and thousands of the former have been known to die at Cabo Juby, filling the water reservoirs with their corpses. Mortality and dislocation of the normal stream of migrants are the results of a storm of "irifi", Perhaps they are the origin of the irregular waves of birds arriving in Europe.

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Nomenclatorial Notes on Philippine Pygmy Woodpeckers

by DR. KENNETH C. PARKES

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As has been pointed out by Salomonsen (*Vid. Medd. Dansk Nat. Foren.*, vol. 115, 1953, p. 273), the species limits among the Pygmy Woodpeckers (*Dendrocopos*) of eastern Asia have long been a subject of controversy. One of the most frequently proposed combinations is the inclusion in a single species of the *moluccensis* group (Malay Peninsula and East Indies) and the *maculatus* group (Philippines). This treatment was followed by Hachisuka (*Birds of the Philippine Is.*, vol. 2, 1934, p. 235), Peters (*Bull. M. C. Z.*, vol. 86, 1943, p. 101), and Salomonsen (*loc. cit.*). Peters later (*Check-list of Birds of the World*, vol. 6, 1948, p. 203) combined *moluccensis* with the Indian *nanus* group, but let *maculatus* stand as a separate species. Each of these authors, when combining the *moluccensis* and *maculatus* groups, has used the former name for the species as a whole. They have somehow overlooked the fact that *Picus maculatus* Scopoli, 1786, is older than *Picus moluccensis* Gmelin, 1788. Those authors who consider these two groups conspecific must, therefore use *maculatus* for the combined species; in fact, *maculatus* is the oldest name among the Asiatic Pygmy Woodpeckers as a whole, and must be used no matter how many are considered conspecific.

Salomonsen (*loc. cit.*) described a new race from northern Luzon as *Dendrocopos moluccensis igorotus*, basing his diagnosis primarily on large size as compared with *D. m. validirostris* of Manila. As in many other species, this woodpecker exhibits a size cline, diminishing from north to south, within the island of Luzon. Salomonsen has merely given a name to the extreme population, admitting that there are no reliable colour characters. In view of the overlap of measurements (wing of ♂: *validirostris*, 79-85 mm.; "*igorotus*", 83-88 mm.; wing of ♀: *validirostris*, 80.5-85 mm.; "*igorotus*", 83-91.5 mm.), it hardly seems worthwhile to recognize two named subspecies on Luzon.

Peters (1943, p. 101) suggested that the "Mindoro race of *Dryobates moluccensis* may prove separable from the topotypical Luzon bird." Specimens from the islands of Mindoro, Marinduque, and Catanduanes are in no way different from those of Luzon.

In his *Check-list of Birds of the World* (vol. 6, 1948, p. 204), Peters listed the type locality of *Dendrocopos maculatus fulvifasciatus* (Hartgitt (*sic*)) as "Basilan and Mindanao; type from Zamboanga, Mindanao." Actually, Hargitt's ♀ type was from Zamboanga, while his ♂ type was from Basilan. Hachisuka (1934, p. 234) fixed the type locality as Basilan, a perfectly valid restriction. Therefore, as pointed out by Hachisuka, *Yungipicus basilanicus* Steere, 1890, is a pure synonym of *Yungipicus fulvifasciatus* Hargitt, 1881. This point becomes of importance if Basilan specimens should prove separable from those of Mindanao. Examination of a small series indicates that this may well be so. Males from Basilan appear to have less red on the head than those of Mindanao, restricted into two lateral patches not connected with a scattering of red feathers as is true of Mindanao males. Basilan males measure smaller (wing 80, 81, 82.5, 83; tail, 37, 37.5, 38, 39) than those of Mindanao (wing 87, 89; tail, 41, 43). This size difference, oddly enough, does not appear among the females measured (Basi-

lan, wing 84.5, 86.5, 88; tail, 38, 39.5, 40.5: Mindanao, wing 86, 86, 86; tail, 39, 43, 43.5). Longer series may show that the Mindanao population is worthy of nomenclatorial recognition, in which case the name *apo Hachisuka* is available. Hachisuka described this as a large race confined to Mount Apo, Mindanao, but apparently compared his material only with Basilan specimens of *fulvifasciatus*. He gave measurements of one male and one female, and I have measured an additional female from Mount Apo. The two females are slightly larger (wing 90, 90) than the other Mindanao females measured (wing 86, 86, 86), but the male (wing 88) falls right between the two others from Mindanao (wing 87, 89). Hachisuka's method of tail measurement was apparently not the same as mine, since his figures are several millimetres higher.

I am indebted to Dr. Dean Amadon for permission to use the facilities of the American Museum of Natural History for this study.

Note on *Cinnyris manoensis* Reichenow

by MR. J. D. MACDONALD

Received 30th October, 1957

There are different opinions regarding the relationships of *Cinnyris manoensis* Reichenow, 1907, from Mano at the north end of Lake Nyasa (9°15' S; 33°48' E). Sclater (1930: 694) listed it as a race of *chalybeus* with the remark that it was only known from the type. What was thought by Lynes (1934: 116) to be a second specimen was taken by him at Dabaga, south-west of Iringa (8°10' S; 35°45' E); he noted that it resembled the type "except in being considerably darker below the scarlet breast-band." Lynes listed it separately from other specimens collected in the same area, though not the same locality, which he identified as the race *ludovicensis* (now known to be *intermedius*). Meise (1937: 143) considered *manoensis* to be conspecific with *afer*, *ludovicensis* and *graueri*. Grant and Praed (1947: 84), who did much to clarify the identity of the races of *Cinnyris chalybeus* in east Africa, put *manoensis* into the synonymy of *intermedius*. Schouteden (1949: 164; 1956: 186) and Chapin (1954: 248) identified as *manoensis* specimens taken in the south-east Belgian Congo.

In order to resolve these differences Dr. E. Stresemann lent from the Berlin Museum the type of *manoensis* (and also the type of *Cinnyris chalybeus gertrudis* Grote); Dr. Schouteden of the Belgian Congo Museum, Tervuren, and Dr. D. Amadon of the American Museum of Natural History lent the specimens from the south-east Belgian Congo identified as *manoensis*; and the Director of the Museo Bocage, Lisbon, lent the type of *Cinnyris intermedius* (Bocage).

In the first place the *manoensis* type clearly belongs to the species *chalybeus*. It is practically identical in every feature with the type of *bractiatus* and therefore the name cannot be put into the synonymy of *intermedius* unless *bractiatus* goes also. But *bractiatus* and *intermedius* are readily distinguished and their characters remain fairly constant throughout populations with quite well defined allopatric ranges. Therefore it is only the names *bractiatus* and *manoensis* which are synonymous and as *manoensis* is older (1907) it takes precedence over *bractiatus* (1933).

The characters distinguishing *intermedius* and *manoensis* (olim *bractiatus*) can now be defined more clearly than was done by Grant and Praed.

One of the most significant features is the iridescent bluish or purplish colour on the tips of the upper tail coverts. This colour is present in *manoensis*, though in lesser amount than in other races of *chalybeus*, but it is absent in *intermedius*. In some *intermedius* the upper tail coverts are tipped with iridescent green, similar to mantle colour, and the rest have no iridescent colours at all; these variations occur in approximately equal proportions in the sample examined and they appear to be irregular in geographical distribution. This colour difference between *manoensis* and *intermedius* is correlated with a size difference which appears to be significant, especially in the length of the bill, as follows:—

	<i>manoensis</i>	<i>intermedius</i>
Wing:	59 – 67; Mn. 63.3 mm.	59 – 65; Mn. 61.3 mm.
Tail:	42 – 50; Mn. 45.75 mm.	38 – 45; Mn. 40.4 mm.
Bill:	23 – 27; Mn. 24.4 mm.	19 – 22; Mn. 19.9 mm.

For the most part the junction of the races is quite well defined. It lies roughly south-west to north-east along the upper Zambesi and its tributary the Loangwa. There are several small distributional inconsistencies. For instance, of two specimens from the Khana River, Southern Rhodesia (18°35' S; 28°30' E) and another two from Danger Hill, Mpika District, Northern Rhodesia (11°32' S; 31°36' E) one of each is identifiable with each of the races. Although from the same localities perhaps it is significant that the specimens were taken on different days and may not therefore have belonged to interbreeding populations. An apparent over-lap is indicated by two specimens from Lavusha Manda, Mpika District (12°22' S; 30°52' E) having the characters of *manoensis* and two from Metenje, Serenje District (12°50' S; 31°10' E) having those of *intermedius*. A specimen from Blantyre (12°50' S; 35°5' E) well inside the range of *manoensis* has the dimensions of that race but lacks iridescent colours on the upper tail coverts.

There is a west to east junction of the races between the Loangwa and Lake Nyasa at about latitude 13°50' S; for example, in Nyasaland Benson (1953: 72) says that *bractiatus* (= *manoensis*) is replaced by *intermedius* from Nchisi (13° 20' S) northwards. Beyond Lake Nyasa information is scantier and racial limits are more difficult to define. Benson found *manoensis* on the Njesi plateau on the east side of the lake (12°45' S) ten miles north of Unangu. (The specimen is not listed in his paper in *Ibis*, 1946). The type of the race, a specimen with average characters, is from Mano which is just north of the lake, but Meise got three specimens (not examined) from the Matengo highlands (10°50' S) on the east side which lack the iridescent bluish colour on the upper tail coverts as in *intermedius*. Specimens which are not quite typical of either race are the type of *Cinnerys chalybeus gertrudis* Grote from Songea (10°40' S) and the Lynes specimen from Dabaga. The former has about equal amounts of iridescent bluish and greenish colour on the upper tail coverts and dimensions which would fit either race — unfortunately the bill is broken. The latter has bluish colour on the upper tail coverts as in *manoensis*, dimensions more akin to those of *intermedius* but a wide scarlet breast band and a belly colour not quite typical of either: other specimens taken in this area, but not actually at Dabage, are more like *intermedius*.

The specimens listed by Schouteden and Chapin as *manoensis* all come from the Marunga highlands (app. 7°30' S; 30°0' E) in the south-east

Belgian Congo just west of the south end of Lake Tangayika. It is now found that these specimens are a better match with the races *whytei* and *graueri* currently attached to the species *Cinnyris afer*, but they are not identical with either. They are very similar in dimensions and the relatively longer tails of *whytei* and *graueri* readily distinguish this group from races of *chalybeus*. It seems likely that these birds are representatives of a group of related populations now isolated at high altitudes on the mountain chain bordering the great Rift Valley. The Marungu highlands would appear to belong to this chain and lie between the Nyika plateau in northern Nyasaland, where *whytei* is found, and the Kivu group of mountains, where *graueri* occurs; other links in the chain are Ruwenzori with the race *stuhlmanni* and mountains south of Kivu with the recently discovered *chapini*. The Marungu specimens, though few in number for critical determination, seem to be sufficiently distinct to warrant a separate name, as follows:—

Cinnyris Afer Prigoginei new race

Description: Iridescent colours of head and mantle bluish-green as in *graueri*, not yellowish-green as in *whytei* and races of *chalybeus*; iridescent colours of upper tail coverts and narrow breast band purplish as in *graueri*, not bluish as in *whytei* and races of *chalybeus*; scarlet breast band narrow as in races of *chalybeus*, not broad as in *afer*; belly colour and dimensions similar to *whytei*.

Distribution: Marungu highlands, south-east Belgian Congo.

Type: Adult male from Sambwe, Marungu highlands, taken on 28th February, 1929, at 6100 feet. Dimensions: wing 64, tail 52, bill 22 mm. American Museum of Natural History Reg. No. 289664.

Remarks: In keeping with the practice adopted with related races this one is named after another well-known African ornithologist, Dr. A. Prigogine.

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On the Populations of the Bullfinch, *Pyrrhula pyrrhula* Brisson in Western Europe, and the possible Significance of certain Aberrant Characters in that Species.

PART ONE

by DR. JAMES M. HARRISON

Received 1st October, 1957

The problems of the taxonomy of the Bullfinch *Pyrrhula pyrrhula* Brisson in western Europe have been investigated by a number of eminent systematists including Hartert¹ (1910 – 22), Matthews and Iredale² (1917), Stresemann³ (1919 – 28), Niethammer⁴ (1930), Mayaud, Heim de Balsac

and Jouard⁵ (1936), Hartert and Steinbacher⁶ (1932 - 38), Mayaud⁷ (1939), Clancey^{8 9 10} (1947 - 48), Meinertzhagen¹¹ (1947 - 48), while the most recent and certainly the most comprehensive review on the genus was completed by Voous¹² in 1949.

That the species and its races have aroused such interest is of course in itself testimony to the degree of taxonomic complexity existing within the species. This will be evident to anyone examining series from western Europe especially, where despite the separation of several races, overlaps of colour and measurements are found. These slight differences often make recognition of the described forms a matter of fine judgment, a percentage of individuals in contingent populations being virtually identical.

It was the latter aspect of the problem which, owing to the destructive proclivities of the species in the fruit growing areas of south and south-eastern England, prompted the Ministry of Agriculture, Fisheries and Food to seek information as to the possible origin of the vast numbers of Bullfinches which annually ravage the crops and inflict damage of no small economic importance.

When it is realised that on one Kentish farm alone, the average annual numbers destroyed have been round about 400 birds for a number of years now, some idea can be gained of the density of the population and the economic importance of the damage done to the industries concerned. In fairness to the position in which the fruit farmers are placed which has made such control by shooting imperative, a control which incidentally is only exercised for about three months and ceases at the time when the birds are nesting, it must be stated that many other methods of discouragement have been, and are still being tried, though proving so far ineffective.

Since 1954, through the kind co-operation of various county horticultural officers, fruit farmers and other interested individuals, samples of the birds destroyed have been sent to me, and a very comprehensive material has in consequence come under review.

This material has been submitted to a critical examination with adequate series of birds from western European countries, and more particularly from France.

It will perhaps be best now to set out the generally accepted position, in so far as the western populations and their races are concerned, a position investigated and confirmed by Voous¹² (*loc. cit.*). This author recognises in western Europe, (1) *Pyrrhula p. germanica* (Brehm) 1831, Renthendorf, Thuringia, (2) *P. p. coccinea* Gmelin, 1789, Karlsruhe, Baden, S.W. Germany, (3) *P. p. nesa* Matthews and Iredale, 1917, Tring, Hertfordshire and (4) *P. p. wardlawi* Clancey, 1947, Perthshire, Scotland, while Voous¹³ has recently separated the Bullfinch of the Iberian peninsula under the name *P. p. iberiae*.

In so far as France is concerned Mayaud,⁵ (1936), *Inventaire des Oiseaux de France*, determined the breeding form of the major part of France as *P. p. coccinea*, with the exception of the west where it is replaced by *P. p. europaea* Vieillot 1816*. However in his *Liste des Oiseaux de France*⁷ (1939) he uses the latter name for all populations excepting those of the Alps, Jura and Vosges which he refers to *P. p. germanica*.

*Foot Note: see *Brit. Birds* (Mag.) 2, 130-131: and *ibid.* 13, 4. for discussion on this name.

While the above epitomises the position of the immediate populations in north-western and western Europe, it is necessary to take into account the influence which the northern form has upon the more eastern of the western European populations.

Voous¹² (*loc. cit.*) has shown that approximately east of the Elbe and the Oder, the much larger, brighter and longer-winged nominate race *P. p. pyrrhula* is dominant. This form impinges genetically upon the western race where the two forms meet, and has given rise by intergradation to an intermediate population, as shown by Stresemann³ (*loc. cit.*) to which Brehm's name, *P. p. germanica* has been applied. Although of course in the strictest sense this form is an intermediate and the result of secondary intergradation, it may nevertheless be regarded as a useful genotype in helping to resolve the species complex. While as an intermediate its geographical distribution must be rather inexact, Voous¹² (*loc. cit.*) indicates its centre sufficiently for all practical purposes as "The mountains of south-eastern and central Europe, the submontane (1600 m.), montaine, and subalpine (2300 m.) zones of the Rhodope, Pirin (Alibotusch ; Schnarke and Wolf¹⁴ 1938, and Rila mountains in southern Bulgaria (von Jordans,¹⁵ 1940) . . ."

We must now consider in greater detail the more westerly populations, and in many respects *Pyrrhula* and its races in north-western Europe shows a very close parallel in its evolutionary pattern to some other passerine species in the same area, e.g. *Emberiza citrinella*¹⁶ (*vide antea* 74: 105 – 112, 75: 6 – 12, 17 – 21) where the brighter *E. c. sylvestris* from central Europe has its counter-part as a genotype in *Pyrrhula*, *P. p. germanica*. As with other species complexes the recognition of the dominant genotypes constitutes a primary step towards a correct assessment of the evolutionary pattern.

A comparison of English birds, *P. p. nesa* with those of the Low Countries and northern and western France demonstrates how near they are to one another morphologically, approximately 25% being almost identical. It is however not quite true that the race *P. p. nesa* is difficult to uphold, for in my opinion English males mostly lack the basically scarlet tinge on the ear-coverts and under-parts of the French specimens, while English females are, as was stressed by Hartert¹ (*loc. cit.*) browner and darker.

Certain generalisations in assessing *Pyrrhula* populations are to be noted: firstly is the fact that the further any population is removed from a zone of secondary intergradation the more marked is the degree of differentiation: this of course applies equally to a good many other species. In so far as *Pyrrhula* is concerned this is very apparent when birds from north-western Europe (e.g. the British Isles and the Netherlands) are compared with specimens from the Pyrenees. Secondly, male Bullfinches can be recognised as being dimorphic throughout the range of the species, i.e. some males are more brilliant, e.g. near Tangerine (*Maerz and Paul*¹⁷ Pl. 2, 11 H.), others pinker, nearest to Persian Melon (*Maerz and Paul*,¹⁷ Pl. 3, 10 B): essentially the difference lies between a brilliant red-scarlet range, and a softer red-pink range, while varying intensity, i.e. light or dark also lends considerably to the individual variation.

With regard to the males of *P. p. wardlawi* the same dimorphism is apparent as also is the variation in respect of lighter and darker individuals. The mantles show a greater uniformity in the tone of the grey than do the

mantles of *P. p. nesa*. I find on the ample series which has been available to me that the colour criteria claimed by the author of the Scottish form are substantiated, and this fact together with the significantly smaller bill in both sexes (Fig. 1) establishes *P. p. wardlawi* as a good race.

It is to be noted that birds from the extreme south-west of England tend to be brighter, i.e. more scarlet-red. In this respect the species again shows a close parallel with males of *Emberiza citrinella* which in this part of England are of a much brighter yellow than birds from the eastern and south-eastern districts, in this respect inclining strongly to the Scottish race, *E. c. caliginosa* described by Clancey.

In the females also some degree of individual variation is apparent, some being browner others, a minority being greyer on the upper-parts. This variability is less evident in *P. p. wardlawi*, which may be said to be mostly greyer than browner, they are altogether colder in tone and are nearest to 1 A, (*Maerz and Paul*,¹⁷ Pl, 39). Considerable variation is to be noted in the grey of the nape in females of *P. p. nesa*, this being well defined in some but ill defined and weak in others.

These variable characters all tend to produce, both individually and in the series, an overall picture of inconstancy in the populations inhabiting England and to some extent also in those of north-western Europe. It is only when birds from northern, north-eastern, central, south and south-eastern European countries are examined that a greater degree of morphological constancy is found, which as is well known, is also linked with larger average measurements (see Voous,¹² *loc. cit.*).

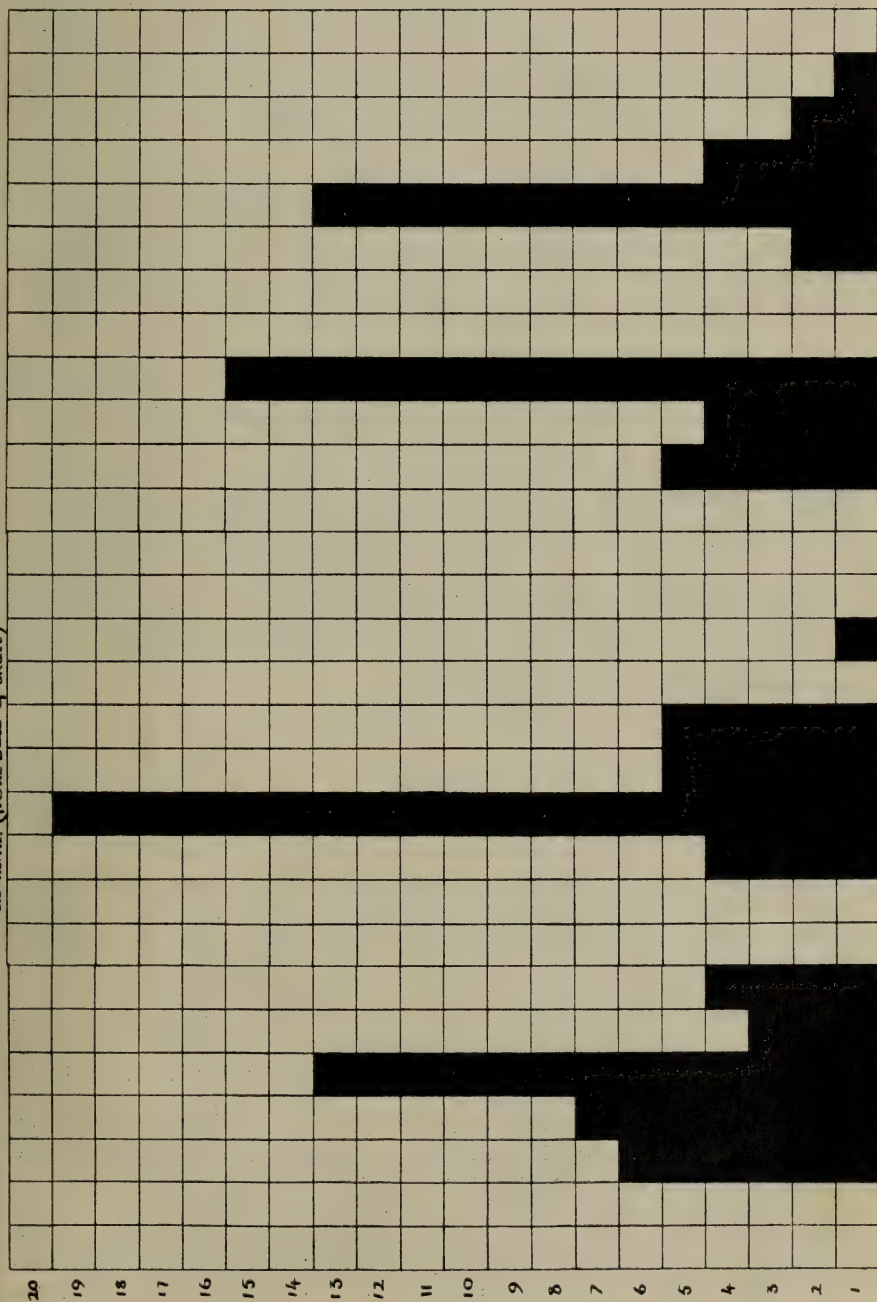
Although the brown and grey phases in the females grade into each other rather insensibly, the predominantly brown individuals constitute at least 75% of the English series which are also definitely darker on the mantles than birds from northern France, *P. p. coccinea* (*europaea* auctorum). A very few individuals could be interchanged in the series as virtually indistinguishable. The under-parts are equally variable ranging from a pinkish brown to buffy brown, some darker some lighter.

It can be appreciated therefore that the English and the north-western European populations are morphologically very close to one another. When compared with the above two races, viz: *P. p. coccinea* and *P. p. nesa*, females of *P. p. wardlawi* are more uniform, of a colder tone of grey brown and have a better defined and more constant grey nape (see Clancey,^{8 9 10} *loc cit.* 1947 - 48.).

There is no evidence that birds from the adjacent Continental countries occur as immigrants, in fact such movements as have been recorded within the British Isles have all been of an extremely local nature, and of some fifty recoveries, one of eleven and another of twelve miles are the maxima recorded (Robert Spencer, *in litt.* 18.iv.57).

The occurrence of the northern European form *P. p. pyrrhula* as an irregular autumn and winter immigrant is of course well established. It is however possible that an occasional individual, or even a pair might reach our shores from north-western Europe, but so far no positive evidence is available to that effect. This possibility is suggested by a pair which was collected in Quex Park, Thanet, in June 1924, as noted elsewhere,¹⁸ for both the male and the female are morphologically inseparable from examples of *P. p. coccinea* and are quite distinct from breeding material from the British Isles.

in m.m. (from base of skull)



8.5 9 9.5 10 10.5

9 9.5 10

8.5 9 9.5 10 10.5 11

9 9.5 10 10.5 11

While this paper was in the press, I learned from Mr. H. E. Axell (*in litt.* 31.x.57) that at Dungeness during October 1947 several Bullfinches were seen on 17th October, and a female was trapped; the wing measurement was 83 mm. so we can conclude that it was not a bird from northern Europe. On 24th October, another female was trapped; this individual's wing measured 82 mm. (*vide* H. E. A.) and was regarded as of the "British race" and was noted to be "more buffish-pink on the underparts" than the bird of 17th October. Two males were seen near one of the traps on 27th October, and on 2nd November, three more females were seen. (*vide* H. E. A. 3.xi.57.). While of course there is nothing conclusive about the above, the circumstances and records are nevertheless worthy of note.

Measurements: Voous¹² (*loc. cit.*) has shown that there is a progressive slight increase in wing-length from south-west to north-east. The smallest birds are to be found in south-western France and in the British Isles (79 mm. to 83.1 mm.), while the species reaches its greatest size in northern Europe and in western U.S.S.R. (90 mm. to 96 mm.).

Within the populations inhabiting western Europe differences in most of the measurements usually taken are very slight. This, as it affects wing measurements in a sedentary species is what one would expect.

A demonstrable diminution in bill size exists in *P. p. wardlawi* as was claimed for the race by its author in the original description. This measurement is constant, or all but constant, and is both statistically and systematically significant, (Fig. 1): it is of course also not without biological significance, and demonstrates the fact that although a sedentary species which has been split up into a number of geographical races, occupying a contingent area of some considerable extent may show no marked difference in general body measurements, yet, some more sensitive organ may reflect some change in environment and respond by a fundamental morphological modification in size of that organ.

(to be concluded)

Gavia

by CAPTAIN C. H. B. GRANT and MR. C. W. MACKWORTH-PRAED

Received 11th August, 1957

Langton in his MS. notebooks, Orn. names and terms (unpublished), now in Bird Room, British Museum (Natural History), says that "Gavia—Gull, a sea-bird, probably a sea-mew. The name given by Venetians to a Gull." Hoare, Italian Dictionary, 1925, gives Gavina (dim. *L.gavia*, gull). This vernacular name has been adopted by the following:—

1758. Moehring *Ges.des Vög.* pp. 5 and 54, on p. 54 he gives 70 Kokmeeuw in't latyn *Gavia*, with a description and attaches to this genus one species, Kokmeeuw, the Dutch name for the Black-headed Gull, *Larus ridibundus* Linnaeus.

1760. Brisson, *Orn.* 6, under Gulls, pp. 171, 173, 175, 178, 182, 185, 189, 192, 196 and 199, gives *Gavia* in his vernacular names, but it does not appear in his List of Genera, in Vol. 1, pp. 26 to 60, even numbers.

1788. Forster, *Ench.Hist.Nat.* p. 38, with a description: Awl-shaped bill, feet webbed, four toes. He gives no indication of the type species in this list of genera, nor does he give any authors. He does not claim that any of these names are his own and may possibly have adopted it

- from Brisson. In any case this would be *Gavia* of Forster, as Brisson, *Orn.* 1760, has no such genus.
1820. Goldfuss, *Handb.Zool.* p. 208, gives *Gavia* and attaches to it *Larus marinus* and *naevius* Linnaeus. As no author is given it is here *Gavia* of Goldfuss.
1822. Boie, *Isis*, p. 563, gives *Gavia* and attaches to it *eburneus* and *tridactyla*. He does not claim that the name is his, and does not always give authors to the genera he uses. This is *Gavia* of Boie, as he does not give an author.
1826. Boie, *Isis*, p. 980, gives *Gavia* and attaches to it *eburneus*. Here again it is *Gavia* of Boie.
1829. Kaup, *Naturl.Syst.* p. 99, gives *Gavia* and attaches to it *L.ridibundus*. There is no evidence to show he has adopted it from any other author and it is here *Gavia* of Kaup.
1831. Brehm, *Vög.Deutchl.* p. 766, gives *Gavia* and attaches to it *Gavia naevia*. No author is given so it is *Gavia* of Brehm.
1837. Swainson, *Class.Bds.* 2, p. 373, gives *Gavia* and attaches to it *A.stolidus*. He states that he has adopted *Gavia* from Brisson. As this is not a Brisson genus it is *Gavia* of Swainson.
1842. Macgillivray, *Man.Brit.Orn.* pt. 2, p. 239, uses *Gavia* and states he has adopted it from Brisson. He attaches four species of Gulls. As this is not a Brisson genus it is *Gavia* of Macgillivray, and this he repeats in the 2nd edition, p. 239, 1846.
1844. Boie, *Isis*, p. 191, gives *Gavia* B.1822. B. standing for Boie.
1882. Stejneger. *Proc.U.S.Nat.Mus.* 5, p. 39, gives *Gavia* Boie, 1822, and attaches to it *eburneus*.
1886. *A.O.U.Code and Check List* gives *Gavia* Boie, 1822. Type species *L.eburneus*, and this is repeated in the 1895 List. *Gavia* of Boie, Kaup, Brehm, Macgillivray and Stejneger are all pre-occupied by *Gavia* of Forster, and not one of these authors has given Forster as the author of this genus.
1907. Allen, *Bull.Amer.Mus.Nat.Hist.* 23, p. 279, attached a Diver as the type species to *Gavia* of Forster. Unfortunately, he completely ignored the opinions of earlier authors, in that they have all attached *Gavia* to the Gull and Tern group. This author states that (p. 288) "For the Loons, *Mergus* being untenable, Forster proposed *Gavia* in 1788," and on p. 290, states "diagnosis excludes all species but the Loons;" Forster makes three genera for diving birds, one for the Grebes (*Colymbus*), one for the Auks, as then known (*Uria*), and one for the Loons (*Gavia*), the diagnoses of which are unequivocal and definite, as follows: and here he quotes Forster's descriptions.
- Forster did not "propose" anything in his list, nor did he say to what group of birds he meant his genera to apply, except in as far as many of the genera he gives are of other authors, but this is not so with *Gavia*, the description of which could agree with groups other than the Divers (Loons), as has been shown by the authors given above.
1910. *A.O.U.Check List* follows Allen, 1907, and states that *Gavia* is "based exclusively upon the Loons," which is correct as far as Allen's action is concerned.

In *Bull.B.O.C.* 73, p. 57, 1953, it was incorrectly stated that *Gavia* was of Allen, 1908. In *Bull.B.O.C.* 74, p. 70, 1954, it was incorrectly stated that Boie was the first author of *Gavia*, and in *Bull.B.O.C.* 75, p. 30, 1955, that Boie established Forster's *Gavia* in 1826. Moehring would appear to be the first author to introduce the genus *Gavia* and establish it by attaching it to a known bird.

For Moehring's and Brisson's genera see *Annals and Magazine of Natural History*, Ser. 12, 9, p. 774, 1956, and Ser. 12, 10, p. 221, 1957.

Colymbus

by CAPTAIN C. H. B. GRANT and MR. C. W. MACKWORTH-PRAED

Received 11th August, 1957

Linnaeus' genus *Colymbus* has been the subject of controversy, mainly between American and British systematic ornithologists as far back as 1882. The Americans have used this genus for the Grebes and it is so given in the *A.O.U. Check List* of 1886, 1895, 1910 and 1931.

The principal American argument being that Brisson in 1760 took out the Grebes and placed them under this genus, and the principal British argument being that Latham in 1787 also took out the Grebes, but created a new genus, *Podiceps*, for them and left the Divers in the genus *Colymbus*.

The history of this name is as follows:—

1758. Linnaeus, *Syst.Nat.* 10th ed., gives both Divers and Grebes in that order.

1758. Moehring, *Ges.der Vög.* (Nozeman & Vosmaer ed.), p. 6 and p. 58, and on p. 58 gives:— 77. Fuut.Aarsvoet, in't Latyn *Colymbus* Linnaeus *Syst.Nat.gest.* 51. This is apparently 51 Linnaeus *Syst.Nat.* 9th ed. 1756.

1760. Brisson, *Orn.* 1, p. 50, *Colymbus* (La Grebe), pl. 3, fig. 1, is that of a Great-crested Grebe in non-breeding dress.

In vol. 6, p. 34, there is no reference to Linnaeus under this species, and the only bi-nomial given is Moehring presumably of 1752. Under other species of Grebes is given Linnaeus, *Sys.Nat.* 6th ed.

1766. Linnaeus, *Syst.Nat.* 12th ed. gives Guillemots, Divers and Grebes in that order.

1787. Latham, *Gen.Syn.Bds.Suppl.* p. 294, gives *Podiceps* (*Colymbus* Linn.), and gives Grebes only, placing Great Crested Grebe first, *Colymbus cristatus* Linn. *Syst.Nat.* 1, p. 222, 7, 1766.

Moehring, 1758, was the first author to place the Grebes in the genus *Colymbus*. The nomenclatorial position here would be *Colymbus* Moehring, antedated by *Colymbus* Linnaeus. It now seems clear that the action by both Brisson, 1760, and Latham, 1787, is antedated by the action of Moehring, 1758, and we should agree that *Colymbus* be used for the Grebes. As it has been shown that *Gavia* Moehring, 1758, type species *Larus ridibundus*, is not available for the Divers, we should accept *Cephus* Moehring, 1758, for this group.

The position would be :—

Colymbus Linnaeus, 1758, type species *Colymbus cristatus* Linnaeus, of which *Podiceps* Latham, 1787, with the same type species, would be placed as a synonym.

Cepphus Moehring, 1758, type species *Colymbus immer* Brünnich.

Other authors who have dealt with this subject are :—

Gray, *Cat.Gen.Bds.* p. 125, 1855.

Fitzinger, *Sitzb.Akad.Wien*, 51, p. 320, 1865.

Stejneger, *Proc.U.S.N.Mus.* 5, p. 42, 1882.

A.O.U.Check List, 1886, where *Urinator* is used for the Divers and *Colymbus* for the Grebes, and of 1895, where the same genera are used.

Allen, *Bull.Amer.Mus.N.Hist.* 23, p. 289, 1907.

Mathews, *Nov.Zool.* p. 494, 1910.

A.O.U.Check List, 1910 and 1931, where *Colymbus* is used for the Grebes and *Gavia* for the Divers.

B.O.U.List, Brit. Bds., p. 398, 1915.

Sclater, *Ibis*, p. 818, 1928.

Grant, *Ibis*, p. 330, 1948.

Bull.Zool.Nom. 9, p. 6, I.C.Z.N.Ref.Z.N.(5), 78, 1952.

Harrison, Wynne, Wagstaffe, Staples, Hall and Grant, *Bull.B.O.C.* 73, p. 57, 1953.

It should be noted that apparently all these authors have either overlooked Moehring, 1758, or considered it to be a reprint of his 1752 edition; which it is not.

For Moehring's and Brisson's genera see *Annals and Magazine of Natural History*, Ser. 12, 9, p. 774, 1956, and Ser. 12, 10, p. 221, 1957.

A New Race of Serin from Northern Rhodesia

by CAPT. C. H. B. GRANT AND MR. C. W. MACKWORTH-PRAED

Received 10th October, 1957

Serinus Atrogularis Seshekeensis new race.

Description: Differs from *Serinus atrogularis lwenarum* White, in having the top of the head paler and greyer ; below, much paler, lighter in colour, less warm buffish ; and from *Serinus atrogularis semideserti* Roberts, in having the top of the head greyer and more finely streaked.

Distribution: South-western Northern Rhodesia from Mongu, Senanga, Nangweshi and Sesheke.

Type: In the British Museum. Male Adult. Chunga Pool. Sesheke district, south-western Northern Rhodesia. 10th May, 1952. Collected by National Museum, Northern Rhodesia. Collector's No. M. 56. N.M.N. Rhod. No. 8437. Brit. Mus. Reg. No. 1955. 42. 65.

Measurements of type: Wing 73, culmen from base 11, tail 46, tarsus 15 mm.

Remarks: Four specimens examined, one each from the above localities. Two males and two females, all very similar in plumage. Wing measurements of the three others 70 to 71 mm.

On *Ammomanes cinctura pallens* Le Roi, Orn. Mon. p. 6, 1912: Birsani, Bajuda Steppe, Dongola Province, Sudan

by CAPT. C. H. B. GRANT AND MR. C. W. MACKWORTH-PRAED

Received 23rd October, 1957

This race was described from Dongola Province. Bates described *A. c. kinneari* from "Fifty miles south of Omdurman" in 1935, remarking that his new race is not *A. p. pallens* as the description does not fit it, but he apparently did not see the type. He confines this race (*A. c. pallens*) to the Bayuda Steppe.

Through the kindness of the Director of the Zool. Mus. Alex. Koenig, Bonn, Germany, we have had the loan of the type of *A. c. pallens* and compared it with the series in the British Museum (Natural History). It is a different race, being above more sandy, less rufescent, than *A. c. kinneari* and has not the greyish wash of *A. c. arenicolor* Sundevall, 1850, from Lower Egypt. Niethammer, Bonn. Zool. Beitr. 6, p. 62, 1955, gives *A. c. pallens* as the race occurring in the Ennedi Mts.

The distribution of the three races is as follows:—

Ammomanes cinctura arenicolor (Sundevall)

Alauda arenicolor Sundevall, Oefv. Vet. Akad. Forh. p. 128, 1850: Lower Egypt.

Northern Africa from Morocco to Egypt, the northern Sudan at the second cataract on the Nile and Abu Fatima on coast about fifty miles south of the Egyptian boundary, Palestine, Iraq and Arabia.

Ammomanes cinctura pallens Le Roi.

Air and Ennedi Mts. to Bayuda, Port Sudan and Sinkat.

Ammomanes cinctura kinneari Bates.

Ammomanes cinctura kinneari Bates, Bull. B.O.C. 55, p. 140, 1935: Fifty miles south of Omdurman, Sudan.

Omdurman and fifty miles south of Omdurman.

A New Race of the Long-Billed Pipit from Nigeria

by CAPT. C. H. B. GRANT AND MR. C. W. MACKWORTH-PRAED

Received 10th October, 1957

Anthus Similis Josensis new race

Description: Darker above than *Anthus similis asbenaicus* Rothschild, and all other races of the species.

Distribution: Known only from the type locality.

Type: In the British Museum. Adult, not sexed. Jos, central Nigeria, 20th September, 1951. Collected by R. E. Sharland. Brit. Mus. Reg. No. 1952.58.3.

Measurements of type: Wing 85, culmen from base 18, tail 66, tarsus 24 mm.

Remarks: This is a single unsexed adult in fresh dress which shows characters that differentiate it from other races of this species. Mrs. B. P. Hall has been studying the Pipit group and, as we are now compiling the "Birds of West & Central Africa," she has agreed that we give this central Nigerian bird a name. In view of its wide separation from other known races of the species we do not hesitate to do so on a single specimen.

On *Malaconotus blanchoti* Stephens, Gen. Zool. 7, p. 161, 1826

by CAPT. C. H. B. GRANT AND MR. C. W. MACKWORTH-PRAED

Received 10th October, 1957

This name was founded on Levaillant's Plate 285, p. 122, in his *Ois: d'Afrique*, 1808. Clancey in Bull. B.O.C. 77, p. 99, 1957, has drawn attention to the small bill of the figured bird and suggested that it could be the Sulphur-breasted Bush-Shrike *Chlorophoneus sulfureopectus* (Lesson) and not the Grey-headed Bush-Shrike *Malaconotus blanchoti*.

In view of this we have compared the plate with both the above species and note, as has Clancey, that the bill is much too small for the Grey-headed Bush-Shrike, and rather too large for the Sulphur-breasted Bush-Shrike, otherwise the markings and colouring could be either. Levaillant states that the figure on Plate 285 is the size of a Thrush, which has wing 110 to 123 mm., as against 87 to 97 for the Sulphur-breasted Bush-Shrike and 117 to 132 for the Grey-headed Bush Shrike.

Certainly the wing measurements of the Grey-headed Bush-Shrike agree better with those of the European Thrush, but the size of the bill in the figure and the general colouring could be either those of the Grey-headed Bush-Shrike or of a female of the Sulphur-breasted Bush-Shrike. We are therefore of opinion that Stephens *Malaconotus blanchoti* should be considered as indeterminate and that the specific name of the Grey-headed Bush-Shrike should be *Malaconotus hypopyrrhus* Hartlaub, Verz. Brem. Samml. p. 61, 1844: Durban, Natal, South Africa, and the Senegal to Cameroon race would be *Malaconotus hypopyrrhus pallidirostris* Reichenow, O.M. p. 91, 1915: Portuguese Guinea.

The History and Relationships of the Races of the Barbet *Lybius leucomelas*

by MR. MICHAEL P. STUART IRWIN

Received 3rd September, 1957

It is now generally agreed that *Lybius leucomelas* (Boddaert) and *Lybius diadematus* (Heuglin) are conspecific. The present distribution of the racial groups and their close association with distinctive habitats in different parts of their range, reflect the evolutionary history of the species. Indeed it does not seem that phylogenically, the races formerly grouped under the specific name *diadematus*, to include *frontatus*, are really as closely related to each other as are the *diadematus-massaicus* section to the southern *leucomelas* group.

Ecologically the species can be divided into two groups; those inhabiting dry or arid *Acacia* country and that to *Brachystegia* woodland. The southern *leucomelas* section is restricted in its distribution to thorn veld. In contrast the *diadematus* section, as formerly grouped, is ecologically divisible into those races specific to *Acacia* thorn veld, (*L.l.diadematus* and *L.l.massaicus*) and that wholly restricted to *Brachystegia* woodland (*L.l.frontatus*).

In central Tanganyika Territory the more southerly ranging race *massaicus* ranges as far as about $6^{\circ} 21' S$. The distinctive *frontatus*, on the other hand, occurs from north-eastern Angola to the Katanga, and through Northern Rhodesia to Nyasaland west of the Shire Rift. *Frontatus* may possibly range into south-western Tanganyika where suitable country exists, but this region is but imperfectly known, and it was not reported by Moreau (*Ibis*, 85, 1943: 377-412). In any case a large distributional gap must remain, and it is very doubtful if the races ever approach each other within several hundred miles. On the other hand the *leucomelas* section crosses the Zambesi River into Northern Rhodesia at Livingstone, whilst *frontatus* is found at least as close as Chilanga $15^{\circ} 35' S$, $28^{\circ} 18' E$. Neither, however, would be expected to come into contact owing to their conflicting ecological requirements.

The races specialized to an *Acacia* thorn veld habitat, form part of a closely associated group of species and races of interrupted or discontinuous distribution, that are represented in south and south-western Africa and that again reappear in the arid ecologically similar country that extends down through central Tanganyika to the Rukwa trough, (though *massaicus* is not known to range as far south as this area), but in no other known instance is that an intervening race characteristic of an essentially different biome, among the many polytypic species involved. Benson, Irwin and White (*Proc. Pan-Afr. Orn. Congr.* in press) have discussed the faunal elements associated with *Brachystegia*, and on zoogeographical grounds it would seem that the races of the *leucomelas* group are more closely related to nominate *diadematus* and to *massaicus*, than they are to the intervening, though rather isolated *frontatus*, with which the East African forms were formerly more closely associated, as another species. On the other hand, *frontatus* forms part of an assemblage of distinctive species and races of Angolan origin, that range in varying degrees, eastwards across Northern Rhodesia to Nyasaland, but in this, as in some other cases, fail to cross the Shire Rift.

To summarize, the East and South African populations are considered more closely related to each other than to *frontatus*. The *diadematus* group lacks the black throat, present in *leucomelas* races; both have incipient though indistinct streaking of blobs of the flanks and thighs. All, including *frontatus* have the pattern of the mantle very similar, except that the *leucomelas* and *diadematus* groups have the fore crown in each case a dark red, whereas in *frontatus* it is orange-red. *Frontatus* is of course most distinct in the colour of the underparts, possessing a yellow breast band (the feathers occasionally tipped with orange); abdomen, flanks and thighs with round blackish feather centres, giving a very conspicuous spotted appearance.

The species may have originated in East Africa, where other species, formerly placed in the genus *Tricholaema*, are found. Of these, two, *L. lacrymosus* and *L. melanocephalus* inhabit arid country. In contrast, the *L. hirsutus-flavipunctatus* group are birds of evergreen forest, but all must have originally arisen from a common stock.

PURCHASED

- 2 JAN 1958



Notices

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Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1958

21st January, 18th February, 24th March (jointly with B.O.U.), 15th April, 20th May, 16th September, 21st October, 18th November, 16th December.

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Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

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DR. JEFFERY HARRISON

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BULLETIN OF THE BRITISH ORNITHOLOGISTS' CLUB

HABED

- 3 FEB 1958

Volume 78

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The five hundred and sixty-second meeting of the Club was held at the Rembrandt Hotel, S.W.7, on Tuesday, 21st January, 1958, following a dinner at 6.30 p.m.

Chairman: Mr. C. W. MACKWORTH-PRAED

Members present, 32; Guests, 9; Guests of the Club, Dr. M. Burton and Miss J. Burton; Total, 43.

The late Captain C. H. B. Grant

The Chairman announced with deep regret the death of Captain Claude Grant and members stood in respect. Captain Grant was Vice-Chairman (1940-'43), Editor (1935-'40 and '47 - '52) and Hon. Secretary in 1947.

The Chairman welcomed Dr. J. M. Winterbottom, who conveyed greetings from the South African Ornithological Society.

“Anting”

Dr. Maurice Burton gave a most interesting paper, illustrated with a film taken by his daughter.

He began with a survey of the orthodox views and then discussed his tame Rook which “anted” in steam and in front of an electric fire which it would turn on, and with lighted matches and burning straw. The film illustrated this most excellently and Dr. Burton continued with a discussion on the association of birds and fire, suggesting that “anting” and “fire-eating” are the same phenomena, due to the impression of heat in the mouth. “Anting” he thought, is an action of exaggerated preening and represents an emotional peak, in which a mounting excitement ends in typical “anting,” with or without an ant. The grooming movement of some mammals in response to scents is probably analogous. A stimulating discussion concluded the evening.

Parasitological findings in Viscera sent for examination by Wildfowlers

DR. E. J. L. SOULSBY

During the 1956-57 season 46 viscera were examined at the Department of Animal Pathology, University of Cambridge, in order to ascertain the type and degree of parasitism which occurs under natural conditions. Ten species of wildfowl were represented in the samples, the distribution being as follows: Shoveler 3, Mallard 3, Teal 15, Wigeon 12, Graylag goose, 1 Velvet Scoter 3, Common Scoter 4, Golden Eye 1, Shelduck 3,

Tufted Duck 1. With the exception of three viscera which were sent by Mr. J. L. Hirst of Morecambe, the rest were sent by the Kent Wildfowlers' Association. The author is extremely grateful to the gentlemen concerned who have helped with this survey.

Parasites found:

Nematodes (Roundworms):— *Amidostomum anseris*; *Tetrameres fissispina*; *Echinuria horrida*.

Acanthocephala (Thorny-headed worms):— *Polymorphus minutus*.

Trematodes (Flukes):— *Catantropis verrucosa*; *Psilochasmus oxyurus*; *Echinostoma revolutum*; *Cotylurus cornutus*; *Paramonostomum alveatum*; *Maritrema subdolum*; *Himasthla elongata*; *Hyptiasmus arcuatus*.

Cestodes (Tapeworms):— *Paricterotaenia borealis*; *Hymenolepis gracilis*; *Echinocotyle rosseteri*; *Hymenolepis sp.*

Observations on the parasites found:

Amidostomum anseris is a very common parasite of ducks and geese. It was found in a Greylag goose and in two Common Scoters. It affects the gizzard and causes marked erosions. It also occurs in domestic ducks and geese, sometimes causing severe disease.

Tetrameres fissispina was previously thought to be uncommon in this country but was found in Scoters and a Teal. It may cause serious damage to the proventriculus.

Polymorphus minutus was found in extremely large numbers in Common Scoters and in a Velvet Scoter. Despite gross infection the birds appeared to be healthy.

Paramonostomum alveatum and *Maritrema subdolum* were found in extremely large numbers in a Shelduck which was found dead and also suffered from gross tuberculosis. In addition this bird had a massive infection with *Hymenolepis gracilis*.

Paricterotaenia borealis and *Echinostoma revolutum* were found in large numbers in a Shelduck and a Tufted Duck respectively.

Other parasites were found in small numbers only.

The purposes of this survey are twofold, firstly to obtain information regarding the species of parasites which occur in wildfowl in this country. We do not know which are the indigenous parasites and which are introduced by migratory species of wildfowl. Secondly to obtain information regarding the parasitic burden of apparently healthy wildfowl. We do not know at present what levels of parasitism to expect in the natural state, but it would appear from the few viscera examined so far that generally a low level of parasitism obtains, but apparently heavy burdens can occur with impunity. Nevertheless such burdens may be of importance in so far that they can be a potential menace to the health of the bird if its food supply is curtailed or if other diseases are acquired.

It is only by an extensive and prolonged survey of the parasite fauna of such birds that the importance of parasitism can become apparent. This must be accompanied by other observations on such things as the food supply, abnormal behaviour in migration or use of feeding grounds or abnormal plumage, things which only the man in the field, the wild-fowler, can satisfactorily do.

In time it is hoped that a comprehensive picture will be built up regarding these problems.

Mussel Attached to a Teal

by MAJOR-GENERAL C. B. WAINWRIGHT

Received 12th October, 1957

Several papers have appeared in recent Bulletins dealing with aquatic predators of birds. Pitman¹ mentions the large numbers of one-legged waders to be seen in East Africa, for which clams are believed to be responsible, while Harrison² also mentions one-legged waders and a Wigeon, *Anas penelope*, and he too believed clams were responsible for these amputations, the result of necrosis.

It is of much interest therefore that on 20th October, 1949, I caught a duck Teal, *Anas crecca crecca*, in a duck trap on Abberton Reservoir, Essex, with a fresh water mussel clamped onto its foot. The tarsus was fractured and I amputated the foot at the fracture site and released it. This confirms that at least some of these amputations are due to molluscs, as suggested by previous authors. Dr. Jeffery Harrison also informs me that he shot a Teal with one leg amputated, in Eire in October, 1956.

References:

¹ Pitman, Captain C. R. S., "Further Notes on Aquatic predators of Birds." Bull. B.O.C., Vol. 77, pp. 91 - 2, 1957.

² Harrison, Dr. James M., "Fish and other Aquatic Fauna as Predators of Birds" Bull. B.O.C., Vol. 75, pp. 110 - 3, 1955.

On the Populations of the Bullfinch, *Pyrrhula pyrrhula* Brisson in Western Europe, and the possible Significance of certain Aberrant Characters in that Species.

PART TWO

by DR. JAMES M. HARRISON

Aberrant Characters: The significance of aberrant characters in *Pyrrhula* presents a problem of no small interest.

As with aberrations in other species, these can be roughly divided into those of colour, the heterochromisms, with which this paper is not concerned, and which are usually without systematic significance, while again as with other species, those of pattern which may well offer evidence of evolutionary importance.

In considering any aberrant character the first question that has to be answered is, whether or not, the character in question is found as a constant in any given population of the species. If this can be answered in the affirmative then, in my opinion, the character has evolutionary and phylogenetic significance.

Three aberrant characters are found in *Pyrrhula* and its races throughout its entire range. One of these may be said to be commonly met with, one moderately commonly, the third and last but rarely.

The commonly occurring aberrant character is that in which the two outer tail feathers have, in varying degree a white or pale biscuit coloured streak on the inner vanes towards the tip.

Of this condition study reveals that it is (1) not sex-linked, i.e. it is found in birds of either sex (2) moreover that it occurs in birds of all ages, (3) that its expression may be from the merest fleck, or even as a minimal

expression with just the rhachis, at the site where the white marking is usually found, lacking colour, to a well defined white or pale fawn coloured marking roughly of an attenuated pear shape with its apex directed proximally, measuring sometimes as much as 2 cms. long by 2 to 3 mm. at its widest point, and (4) that it is in some cases only found unilaterally.

It is well known that in the Far Eastern forms of *Pyrrhula*, *P. p. cassini*, *P. p. griseiventris*, *P. p. rosacea* and *P. p. kurelensis* this character is regarded as more or less a constant, particularly in *P. p. cassini* (*kamtschatica* — *auctorum*), while it is less often seen in birds in the western populations.

In order to assess the incidence of this and other aberrant characters the total material was divided into two major groups comprising the eastern and western populations. The dividing line was that indicated by Voous¹² (*loc. cit.* p. 65, Fig. 8.). This line demarcates the significant average difference in size between the eastern and western birds and runs broadly south of the Scandinavian Peninsula, turns south through eastern Germany to bend sharply eastwards along the line of the Carpathian Mountains. East of this line the average wing length varies from 90 mm. to 96 mm., west of the line from 79 mm. to about 89 mm.

From the east 246, and from the west 375 individuals have been investigated. The former group provided 158 males and 49 females, the latter 247 males and 128 females. The accompanying histograms (Fig. II, a, b) demonstrate the prevalence of this character in these two major groups, and it is instructive to note that whereas in the eastern group it is most commonly found in the males, in the western group the incidence has become inverted and is far greater in the females. It would seem reasonable to assume therefore that, as this is so, it is probable that the genes for white tail markings are more commonly carried by the females.

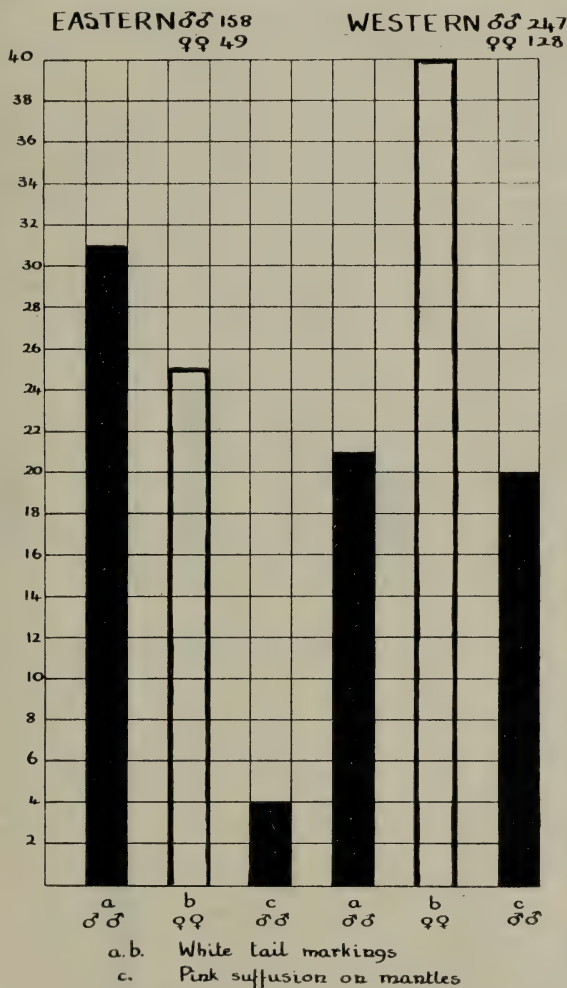
A further interesting comparative study is afforded when the incidence of this character is analysed in the extreme westerly populations, (Fig. III, a. *P. p. coccinea*, b. *P. p. wardlawi*, c. *P. p. nesa* and d. *P. p. germanica*). These again demonstrate the greater incidence in the females of the two western insular, and therefore the most closely segregated, races, *P. p. wardlawi* and *P. p. nesa*. It is significant as indicating the origin of *P. murina* from the Eurasian stock that the white tail markings are found. Unfortunately an insufficient number were seen for any statistical conclusions to be drawn, however the variation was found in both sexes.

Comparing the incidence of this character in *P. p. wardlawi* together with *P. p. nesa* with *P. p. coccinea* the histograms, (Fig. III) again show clearly that where a species is inhabiting a wider distributional area, the incidence is less. What basic principles underlie the incidence of this character in races where it occurs sporadically, i.e. not as a more or less normal constant?

We have already seen that it is in the eastern populations that the white, or fawn, tail markings are normal and characteristic. We have also seen that in the light of ringing recoveries, as well as on morphological considerations the western populations are to be regarded as very sedentary, of this, at the present time we have no evidence to the contrary. Sporadic immigration by birds from northern and north-eastern Europe is also an admitted fact, as is also the intermediate genetic constitution of *P. p. germanica*, the central European form (Stresemann,³ *loc. cit.*, Voous,¹² *loc. cit.* pp. 66 – 67). It is also admitted that where a population, by virtue

of being geographically circumscribed and on that account subjected to the equivalent of a process of intensive in-breeding, that variants by gene recombination may be anticipated, and that this process will be intensified in direct relation to any increase in global numbers of a population so

Fig II



situated. In other words, variants due to gene recombination and, or, other genetic effects, are directly related to the degree of isolation to which a population is subjected and to the density of such population.

The above circumstances would, in my opinion, account for the high incidence of the character under consideration in so far as the two western insular populations are concerned. The lower incidence in the two forms inhabiting the mainland of western Europe, *P. p. coccinea*, and in central

Europe, *P. p. germanica*, offers further support to this hypothesis, while in the case of *P. p. germanica* the incidence is lowered still further by gene dilution from secondary intergradation, (Fig. III a.) from the north and east.

So much for the white or fawn tail markings. The second aberration to which we must now give our attention is that of the pink suffusion of the

Fig. III

WHITE TAIL MARKINGS

(a) *P. p. coccinea* 72 (b) *P. p. wardlawi* 50 (c) *P. p. nesa* 243 (d) *P. p. germanica* 61

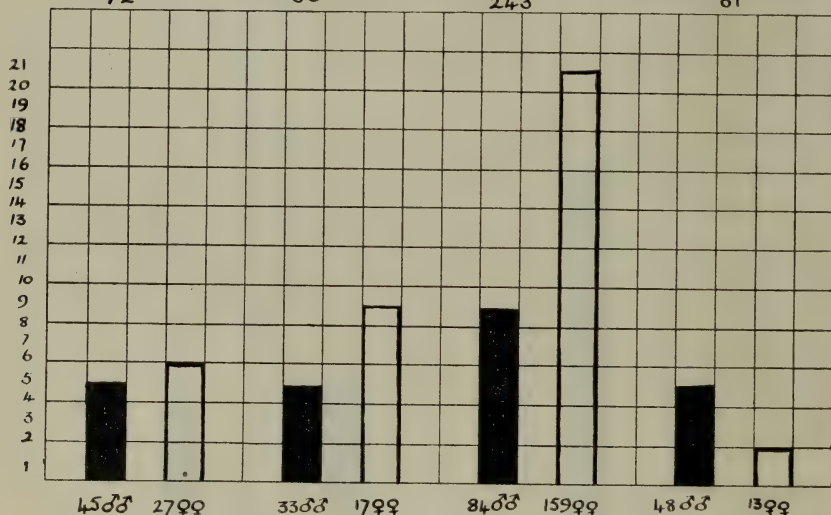
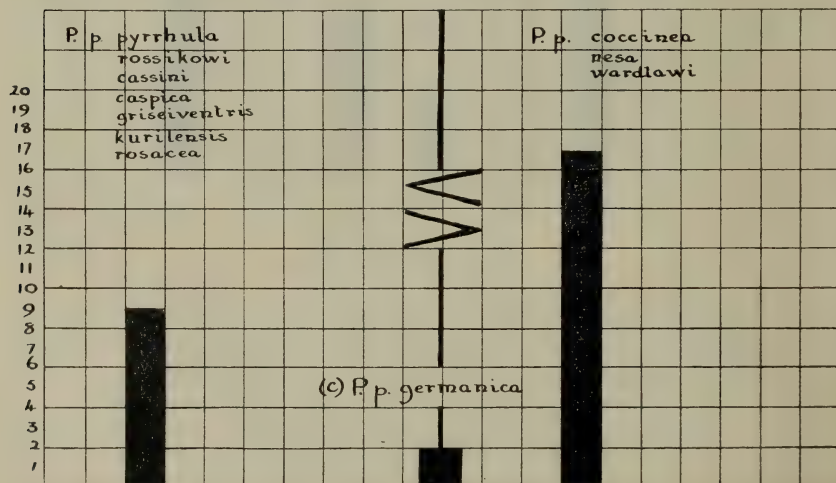


Fig. IV

PINK SUFFUSION ON MANTLES

(a) EASTERN ♂♂ 158

(b) WESTERN ♂♂ 247



grey of the mantle in the male. Here again this is a character which is derived from the eastern forms as it is commonly found in *P. p. cassini* and *P. p. rosacea**

This character is of course only visible in the male as any tendency for its disclosure in the female would be masked by the dark mantle of that sex — possibly one day an albinistic female will help to decide whether this aberrant character is sex-linked or not.

From a study of the relevant histograms, (Fig. IV b) it can be seen that its highest incidence is in the western populations *P. p. nesa*, *P. p. wardlawi* and *P. p. coccinea*, and that only two instances in 61 specimens of *P. p. germanica* (Fig. IV c) were found. It is believed that even were the three groups studied strictly equivalent, that even so the incidence in the western populations would be found to exceed that of the eastern groups for the reasons already advanced above.

A rare variant was the subject of a communication (*antea*, 1957, 77, 113–114).¹⁹ In this the males bear a superficial resemblance to the Far Eastern form *P. p. griseiventris*. Here again both the specimens were found in the western populations *P. p. nesa* and *P. p. wardlawi*. The incidence of this aberration is in the order of 2 in 247 males.

Summary: This paper is based on a study of 621 specimens.

It describes broadly the geographical and individual variation of the western races.

The significance of such aberrant characters as are believed to have a bearing on the evolution and phylogeny of the species is discussed. Evidence in support of the hypothesis of autophoric reverse variation in the species is advanced.

The study reveals negative evidence of any immigration into the British Isles of birds from western Europe, though the possibility of this on a minimal scale cannot be entirely excluded and must await proof by the recovery of ringed birds.

Acknowledgments: This study has been made possible by the kind co-operation of many individuals. I am indebted to The Ministry of Agriculture, Fisheries and Food, at whose instigation this research was initiated, and in particular to the following Officials of the Ministry; Messrs. W. S. English, A. D. Harrison, T. Laffin, M. G. Ridpath, D. A. B. Summers, E. N. English and E. N. Wright.

In addition to the invaluable help given by the above named, I also received many specimens through the kindness of the following, Dr. J. S. Ash, Mrs. Hazel, Miss Monica Newman, Mr. Philip Noakes, Sir Phillip Manson-Bahr, and Mr. Raymond Wickham.

I would also acknowledge gratefully the loan of comparative material from the following sources; through Mr. J. D. Macdonald for the series in the British Museum, Natural History, South Kensington, through Dr. A. C. Stephen for similar facilities from The Royal Scottish Museum, Edinburgh, through Mr. Alfred Hazelwood for the series in the Bolton Museum.

From private collections, supplementing the series in my own collection, I am indebted to Mons. Noël Mayaud and to Dr. Jeffery Harrison. I would also like to add my appreciations to the following for helpful

*Foot Note: According to some authorities this form is regarded as a variant of *P. p. griseiventris* (Keisuke Kobayashi, *in litt.* 12. I. 57).

comments and specific information, firstly to Mr. Keisuke Kobayashi, for examining series of eastern *Pyrrhula* on my account, then to Dr. P. Voipio, of the Department of Zoology, University of Helsinki, to Professor K. H. Voous of the Zoological Museum, Amsterdam, to Mr. H. E. Axell of the Dungeness Bird Observatory, to Mr. Robert Spencer for searching the ringing recoveries for me and to Mrs. Jeffery Harrison for help with the figures in the text of this communication.

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Intestinal Obstruction in a Herring Gull caused by Parasites

by DR. E. J. L. SOULSBY AND DR. JEFFERY G. HARRISON

Received 29th October, 1957

On 19th June, 1957, a recently dead Herring Gull, *Larus argentatus*, was found on the fresh marsh on the Isle of Sheppey, Kent. Wasting was not evident but on post mortem the bird was found to have died from an intestinal obstruction. There was a fusiform distention in the upper part of the large intestine, the swelling being some 2½ inches long and one inch in diameter. The gut wall was mottled and bluish-white in colour and posterior to the obstruction the gut was collapsed. On opening the swollen portion, the lumen was found to be completely occluded by a vast number of trematodes (flukes), as can be seen in the accompanying plate. The trematodes were identified as *Cotylurus platycephalus* (Creplin, 1825). Szidat, 1928. This trematode is found in a wide variety of gulls and also in the Kittiwake, Shag and Cormorant in Europe. Its sites within the host are the Bursa of Fabricius, cloaca, rectum and large intestine.

The life cycle of this trematode is not yet fully known, but in all probability entails snails as the primary intermediate hosts and such fish as the bream, perch and minnow as secondary intermediate hosts, such as occur in the life cycle of other members of this genus.

C. platycephalus has previously been recorded as causing the death of Razorbills in Great Britain (Lowe and Baylis 1934), death in this case being due to a haemorrhagic enteritis. R. H. Poulding has studied the causes of death in 97 diseased gulls, but he has found no such case as this, and states that massive infections by worms are, in his experience, com-



Large Intestine of Herring Gull obstructed by a vast number of the trematode worm *Cotylurus platycephalus*. The gut has been opened over the site of the obstruction.

paratively uncommon in gulls, and he has never seen such a case of acute obstruction as is recorded here.

However, Jennings and Soulsby (1958) have found that Black-headed Gull chicks may acquire exceptionally heavy burdens of trematodes and that these may be responsible for ill health and death.

It is probable that the Herring gull in question was unfortunate enough to eat one or several fish carrying large numbers of metacercariae of *C. platycephalus* and thereby acquired enough trematodes to cause occlusion of the large intestine.

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Cyanomitra batesi in Northern Rhodesia

by MR. JOHN G. WILLIAMS

Received 14th July, 1957

Through the courtesy of Major I. R. Grimwood, Assistant Director of the Department of Game and Tsetse Control, Northern Rhodesia and of Mr. C. W. Benson of the same Department I have had the opportunity of examining a sunbird obtained by Major Grimwood's native collector Enoch Moonga, on the Sakeji River, northern Mwinilunga District, Northern Rhodesia: collector's number IRG 1066. The specimen was collected on 19th December, 1956 in the canopy of the forest along the river.

The specimen is an adult — on measurements a male — of *Cyanomitra batesi* (Ogilvie-Grant). Dr. J. P. Chapin has also examined the specimen and confirms my identification. Major Grimwood's specimen represents a considerable south-easterly extension of the species' range, although Dr. J. P. Chapin (Birds of the Belgian Congo, vol. 4) records a specimen from Kinda in the Lower Katanga, Belgian Congo.



Bills of (from left to right) *Anthreptes tephrolaema*, *Cyanomitra batesi* and *Anthreptes seimundi minor*: natural size.

A few remarks on the distinguishing characters of *Cyanomitra batesi* may be of value to ornithologists in Africa. The species may be confused with *Anthreptes seimundi minor* Bates and with female *Anthreptes tephrolaema* (Jardine & Fraser). The latter may be recognised by its stumpy, less curved bill (see fig 1) and blackish rectrices which lack green tips. *Anthreptes seimundi minor* has a bill very similar to that of *Cyanomitra batesi* but has the tail entirely green. *Cyanomitra batesi* may be recognised by its blackish rectrices with broad olive-green tips to at least the four outer pairs. *Cyanomitra batesi* and *Anthreptes seimundi minor* have the extreme base of the lower mandible dull yellowish-horn: *Anthreptes tephrolaema*

female has a completely black bill, However, it is doubtful whether these three sunbirds can be distinguished in the field except under the most favourable conditions.

The specimen of *Cyanomitra batesi* collected by Major Grimwood has been presented to the National Museum of Southern Rhodesia, Bulawayo.

Geographical Variation in the Knysna Woodpecker *Campthera notata* (Lichtenstein)

by MR. P. A. CLANCEY

Received 24th July, 1957

The Knysna Woodpecker *Campthera notata* (Lichtenstein), 1823: Terra Caffrorum, i.e., eastern Cape Province, South Africa, a close ally of the wide-ranging Golden-tailed Woodpecker *Campthera abingoni* (Smith) of the Ethiopian Region, is confined to the southern and eastern Cape Province, eastwards through Pondoland and East Griqualand to parts of western Natal. It is an inhabitant of both coastal and interior climax forest, as well as dry, and often xerophilous, scrub-forest in the interior, having been taken as far north as Colesberg by Arnot (*vide* Sclater, *Birds of South Africa*, vol. iii, 1903, p. 129, but the species is seldom mentioned in the literature, and at no time has it been suggested that it is subject to geographical variation. The possibility of the existence of demonstrable subspecific variation was, however, brought to my notice when a pair collected at Committees Drift, in the Albany district of the eastern Cape Province, on 7th October, 1956, was compared with a long series in similar plumage obtained in the coastal Pondoland forests by the staff of the Durban Museum in August, 1954, and found to differ in many significant respects. Through the kindness of the Directors of the South African Museum, Cape Town (through Dr. J. M. Winterbottom), the East London Museum, and the Kaffrarian Museum, King William's Town, I have been able to assemble and study a good material of this woodpecker, and have confirmed my earlier impressions, concluding that *C. notata* is certainly divisible into two quite well-marked subspecies. The opportunity was also taken to study the relationship of *C. notata* to *C. abingoni*.

Levaillant, *Histoire Naturelle des Oiseaux d'Afrique*, vol. vi, 1808, pp. 19-21, records having found *Le Pic tigré* in the Knysna Forest, i.e. forêts d'Anteniquoi, and in the country lying between the valley of the Gamtoos River and Caffraria, but the species was not formally described to science until 1823, when H. Lichtenstein described it as *Picus notatus* in *Verzeichniss der Doubletten des Zoologischen Museums . . . Berlin*, 1823, p. 11, the type-locality: Terra Caffrorum. Of the topotypical populations I have a series of 15 specimens before me, the majority of which has been collected during the past four years (Committees Drift, 6; Pirie Forest, King William's Town district, 2; Peddie, 1; East London district, 5; Patensie, near Port Elizabeth, 1). On the basis of eleven specimens in the above series collected since 1953, it can be stated that there is little individual variation in the topotypical populations. There is slight variation in the size of the breast spots and in the mantle colouration, some specimens being particularly greyish, others more greenish, but the series taken as a whole is reasonably uniform.

A series of 16 skins of this woodpecker from the coastal forests of Pondoland exhibits interesting and significant differences when compared with the topotypical material. Viewed in series, Pondoland birds are extremely uniform on the upper-parts, being a darker and more golden mossy-green on the mantles than topotypes, and less conspicuously spotted on the upper back and banded with whitish on the rump, upper tail-coverts and tertials. Examined laterally, they display less spotting on the wing-coverts, but they differ most on the under-parts, being much more densely spotted on the lower throat and breast, the spots grouped and overlapped to form an incipient gorget. The intensification of the ventral spotting also extends over the abdomen and flanks, and the ground colour tends to be greener and less yellowish. This variation follows Gloger's Rule, and reflects the actual difference in the biotopes of the two groups of populations, the Pondoland birds, with much melanin in their plumage, being strictly resident in a heavily forested region with high rainfall and considerable humidity (rainfall at Port St. Johns, Pondoland, c.54.5 inches per annum), whereas those of the topotypical populations, with reduced melanin, inhabit as a whole more open, drier and rather less humid areas (rainfall over the entire Albany district ranges from 10 – 30 inches per annum).

The question of classification is not simply resolved by the recognition of two races. Two specimens from the Knysna Forest collected by J. van O. Marais in 1898/1899, and now in the collection of the South African Museum, are like the Pondoland birds in being heavily spotted below. On the upper-parts one of the Knysna specimens, dated 4th June, 1898, also resembles those from Pondoland, but the other specimen, dated 3rd June, 1899, is exactly like topotypical examples in being paler, rather greyer and more cryptically marked with white. It is difficult to visualize the precise situation obtaining in the populations of *C. notata* found in the Knysna Forest on the basis of two skins collected nearly sixty years ago. The limited data suggest that at some former date the heavily spotted forest form, as understood from the series from Pondoland before me, enjoyed a fairly continuous distribution in the then almost continuous forest ranging from Natal and Pondoland to Knysna and beyond. Subsequent changes in the climate resulting in the reduction and continuity of high forest, culminated in the disruption of the range of the forest form and favoured the spread of the pale populations. With the investment of the Knysna populations by pale birds, and the formation of an austral enclave, the ultimate elimination of the characters of the forest form by genetic swamping by the more numerous surrounding populations was only a question of time. Such a process of racial extinction is suggested by the two Knysna specimens before me. The stability of the Pondoland populations lends support to such a theory, their range being in contact with the pale birds only on its western periphery, so that gene-flow is on a limited scale. An intermediate population seems to occur in the Manubie Forest, near the mouth of the Great Kei River and at the southern extremity of the coastal forests which range to the south of the main Pondoland block, because two specimens from that forest in the collection of the East London Museum combine the characters of both forms.

I believe that we should recognise by name the two following ecological groups of populations of the Knysna Woodpecker: a dark, heavily spotted form confined to the high forests of Pondoland, East Griqualand and

adjacent part of Natal, with an enclave of apparently unstable populations in the forests at Knysna; and a lighter and less heavily spotted one, conditioned to live in drier and often more open woodland, which ranges throughout most of the southern and eastern Cape. For the first form a name will be required, and *Campethera notata relictata* mihi, subsp.nov., is introduced below accordingly. The second form is, of course, the nomino typical one.



(Photo: A. L. Bevis)

Campethera notata (Lichtenstein)

1. *Campethera notata notata* (Lichtenstein)
2. *Campethera notata relictata* Clancey (Type on right)

Note the more densely spotted under-surface and incipient gorget in *C. n. relictata*.

Roberts, in the *Annals of the Transvaal Museum*, vol.viii, 4, 1922, p.222, placed the Knysna Woodpecker in a monotypic genus, *Notopicus* Roberts, which is "characterized by its *entirely different style of colouration* (*italics mine*), and has the tail longer in proportion to the wing than in the preceding *C. a. smithii* (Malherbe), *C. a. abingoni*, *C. b. bennetti* (Smith) and *C. b. capricorni* Strickland), the wing itself more rounded in shape." Our knowledge of the ranges of the races of *C. abingoni* and *C. notata* suggests that the two forms may actually be conspecific, and a careful study of assembled material of all the South African races of *C. abingoni* lends much support to this belief. When compared with *C. a. abingoni* of Natal and Zululand, both races of *C. notata* differ in being more uniformly greenish on the upper-parts, less spotted with buffy white, and the tertials are not so strongly barred (even in *C. n. notata*). On the under-parts *C. notata* is spotted and not streaked, the tail is slightly longer and softer, and the shafts of the rectrices are usually brown and not golden

yellow. In parts of western Natal the ranges of *C. n. relicta* and *C. a. abingoni* are contiguous and mutually exclusive, and the two forms behave as good species. However, a study of the infraspecific variation of *C. abingoni* in South Africa shows that certain races have the under-parts largely spotted and almost unstreaked (*C. a. smithii* (Malherbe), 1845: South Africa; *C. a. annectens* (Neumann), 1908: Sambo, Benguela, Angola). *C. a. annectens* shows a marked tendency for the throat and breast spots to coalesce to form a gorget patch, much as in *C. n. relicta*, a developmental trend which reaches its apogee in *C. n. anderssoni* (Roberts), 1936: Windhoek, South-West Africa. This latter race ranges south to about the Orange River, and occurs in juxtaposition to the north-eastern populations of the spotted *C. n. notata*, which has been recorded as far north as Colesberg. The reduction of the dorsal markings and tertial barring in *C. n. notata*, when compared with *C. a. anderssoni*, is really only one of subspecific import, because the majority of the more salient markings present in that race of the Golden tailed Woodpecker are likewise visible in *C. n. notata*, even though they be largely vestigial or evanescent. Another point of note is that some examples of *C. notata* subsp., have the shafts of the rectrices golden, as in *C. abingoni* subsp., not brownish, and the only morphological character which one can reliably employ to maintain the specific distinctness of *C. notata* is the slightly longer and rather softer tail. Even this character may be simply an adaptation to an existence on trees with smoother barks than the acacias and other coarse-barked species, so favoured by the races of *C. abingoni*. Two courses appear to be open to us in connection with the classification to be adopted — (a) to place *C. notata* and *C. abingoni* in a super-species (*C. notata*), or (b) to treat the races of the two forms of woodpeckers as belonging to a single polytypic species. While it is almost certain that the latter arrangement is the correct one, it would seem desirable to await the production of proof of the intergradation of *C. a. anderssoni* and *C. n. notata* before taking such a step. In the meantime, the Knysna and Golden-tailed Woodpeckers should be treated as component species of the *C. notata* super-species.

As recorded above, it is convenient to recognise two races of the Knysna Woodpecker, and the nomenclature, characters and ranges of these are as follows:

1. *Campethera notata notata* (Lichtenstein)

Picus notatus H. Lichtenstein, *Verzeichniss der Doubletten des Zoologischen Museums . . . Berlin*, 1823, p. 11: Terra Caffrorum, i.e., eastern Cape Province, South Africa.

Adult male: Top of head and nape dark olivaceous grey, the feathers fringed, especially posteriorly, with lustrous scarlet; mantle dull golden green, with variable admixture of pure grey, and barred with broken, vestigial bars of dull white, or simply dotted with white and golden yellow; rump and upper tail-coverts similar, but more strongly barred with whitish on a paler ground; tertials olivaceous with clearly visible, though vestigial, bars of white. On under-parts creamy white, washed with yellowish over the lower breast and abdomen, and the whole surface heavily spotted with black, the spots of the lower throat and breast being massed together, round and often heart-shaped.

Female adult: Similar to the adult male, but with the top of the head olivaceous brown dotted with white, and the red restricted to form an occipital crest. Bill consistently shorter.

Measurements: Wing (flattened) 8 ♂♂ 105 – 114 (108.9), 9 ♀♀ 102 – 108.5 (106.0), culmen ♂♂ 25.5 – 28 (26.8), ♀♀ 23 – 25 (24.6), tarsus ♂♂ 19 – 22.5 (21.5), ♀♀ 20.5 – 23 (21.2), tail ♂♂ 71.5 – 76.5 (73.3), ♀♀ 68.5 – 74 (71.7) mm.

Type: In the Zoological Museum, Berlin.

Range: Wooded country of the southern and eastern Cape Province, east to the Great Kei River and north to about Colesberg. Intergrades to the east of its stated range with the following subspecies. Replaced in the Knysna Forest by unstable populations of *C. n. relict*a (see discussion above).

2. *Campethera notata relict*a, subsp. nov.

Type: ♂ adult. Embotyi, Lusisiki district, Pondoland, eastern Cape Province, South Africa. Sea level. 10th August, 1954. Durban Museum Expedition. In the collection of the Durban Museum.

Diagnosis: Similar to *C. n. notata* but darker and more golden mossy-green on the mantle, the grey wash lacking, and with the markings suppressed; Rump and upper tail-coverts with less conspicuous barring. Wings darker, the spotting on the coverts reduced, often absent, and the bars on the secondaries, particularly the tertials, usually merely indicated. On under-parts darker and more densely spotted throughout in series, the lower throat and breast spots larger and more concentrated and overlapped to form an incipient gorget. Averaging smaller in size.

Measurements: Wing 10 ♂♂ 103 – 107 (105.1), 6 ♀♀ 102 – 107 (104.2) culmen ♂♂ 26 – 28 (27.1), ♀♀ 24 – 25.5 (24.7), tarsus ♂♂ 21 – 23 (21.7), ♀♀ 20 – 21 (20.3), tail ♂♂ 68.5 – 72 (70.1), ♀♀ 69 – 72 (70.4) mm.

Range: The high forests of the eastern Cape Province lying to the east of the Great Kei River, in the Transkei, Pondoland and East Griqualand, in the adjacent parts of western Natal, and with an isolated, unstable group of populations in the Knysna Forest in the southern Cape.

Paratypical material: The Type and twelve paratypes (all in the Durban Museum). Other material: 3 topotypes in the South African Museum.

Measurements of the Type: Wing 106.5, culmen 26, tarsus 23, tail 70 mm.

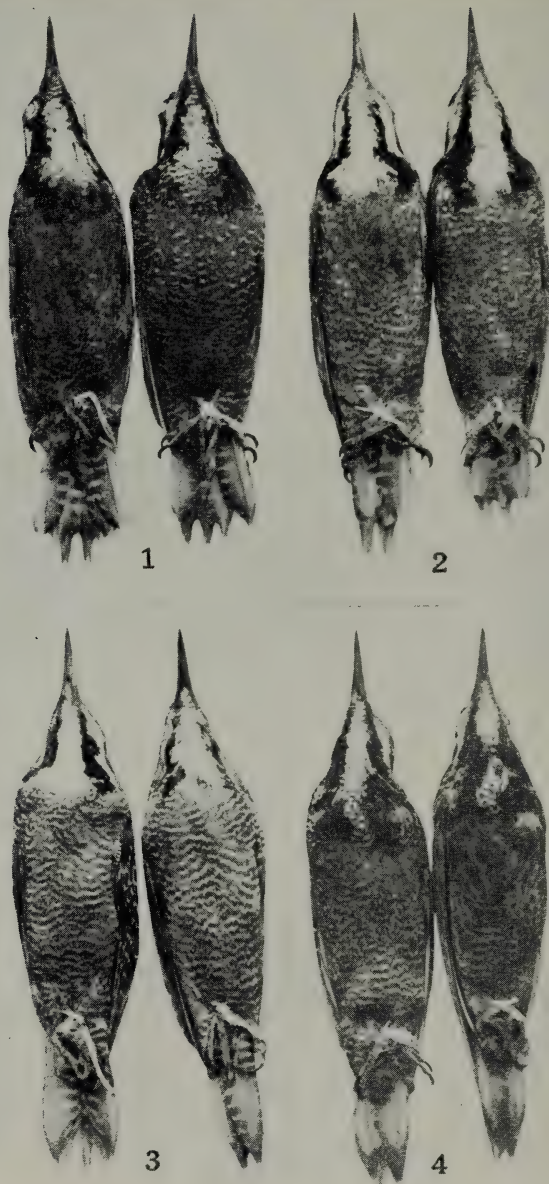
Note: Five females of *C. n. relict*a differ from those of *C. n. notata* in having the head-top almost devoid of spotting, but a sixth example does not vary in this respect. The two females of the Knysna populations discussed above have the head-tops completely spotted. Their wings measure 100 and 104 mm.

The South African Races of the Bearded Woodpecker *Thripias namaquus* (Lichtenstein)

by MR. P. A. CLANCEY

Received 24th July, 1957

The large Bearded Woodpecker *Thripias namaquus* (Lichtenstein) of the Ethiopian Region ranges in some four or five geographical races from French Equatorial Africa, the Sudan, Abyssinia and the Somalilands, south to Angola and South-West Africa in the west, and Natal and the



(Photo: A. L. Bevis)

Races of the Bearded Woodpecker, *Thripias namaquus* (Lichtenstein)

1. *Th. n. coalescens* Clancey

3. *Th. n. namaquus* (Lichtenstein)

2. *Th. n. decipiens* (Sharpe)

4. *Th. n. schoënsis* (Rüppell)

The marked difference in the colouration of the under-parts between *Th. n. coalescens* and *Th. n. namaquus*, and the intermediate condition of that of *Th. n. decipiens* should be observed. The striking similarity between *Th. n. coalescens* and *Th. n. schoënsis* is most noteworthy.

eastern Cape Province in the south-east. Peter, *Check List of the Birds of the World*, vol. vi, 1948, p. 222, and Chapin, *Birds of the Belgian Congo*, part ii, 1939, pp. 595–597, have both summarized our present state of knowledge concerning the species' geographical variation, recognising four races: *Th. n. saturatus* Berlioz, 1934: Bozum, Ubangi-Shari, French Equatorial Africa; *Th. n. schoënsis* (Rüppell), 1842: Shoa, central Abyssinia; *Th. n. decipiens* (Sharpe), 1884: Shimba Hills, near Mombasa, coastal Kenya Colony; and *Th. n. namaquus* (Lichtenstein), 1793: Damaraland, South-West Africa. In an earlier note the races of this woodpecker were reviewed by Moreau, *Bull. B.O.C.*, vol. lvii, 1, 1936, pp. 10–11, who placed *Th. n. decipiens* as a synonym of *Th. n. namaquus*, a view adopted by Mackworth-Praed and Grant, *Birds of Eastern and North Eastern Africa*, vol. i, 1952, pp. 767. Four other races have been proposed by specialists from East Africa and Angola, but none of these is currently acknowledged. Within the confines of the South African sub-continent only the nominate race is at present believed to occur, but a recent study of material in the collections of South African museums shows that three subspecific groups should be accepted in our systematic arrangement of the southern populations, one subspecies of which is described below as new.

For the loan of material I am grateful to the Directors of the South African Museum, Cape Town (through Dr. J. M. Winterbottom), the East London Museum, the Kaffrarian Museum, King William's Town, and the Transvaal Museum, Pretoria. I am also indebted to Herr W. Hoesch, of Okahandja, for the collecting of a small series of Damaraland *Th. n. namaquus*, and to my colleague, Mr. J. G. Williams, Ornithologist of the Coryndon Museum, Nairobi, for kindly presenting carefully prepared material of *Th. n. schoënsis*.

Picus Namaquus A. A. H. Lichtenstein, *Cat. rer. nat. rar.*, Hamburg, 1793, p. 17, was stated by its describer to come from the interior of South Africa, South Africa to Namaqualand. In most standard works the type-locality is simply given as the "Interior of South Africa", but of recent years this has become restricted to Damaraland, South-West Africa, presumably on the basis of what appears to be the first definitely locality within the established range of the species in sub-continental South Africa to be given in the literature (excluding that of Levaillant: see below) subsequent to the publication of the description, i.e. the reference of Strickland and Sclater "List of a Collection of Birds procured by C. J. Andersson in the Damara Country, with notes," in Jardine's *Contributions to Ornithology*, 1852, p. 155. The accuracy of this restriction may be questioned, because in his important recently published account of the travels of Levaillant, Captain C. H. B. Grant, *Ostrich*, vol. xxviii, 2, 1957, p. 95, points out that Lichtenstein's *Cat. rer. nat. rar.*, is in actual fact a catalogue of the Holthuyzen mammal and bird collections, which were offered for sale at Einbeck's Sale Rooms, in Hamburg, on 21st October, 1793. Some of the birds collected by Levaillant during his South African expedition had been acquired by Holthuyzen, in 1784, and were disposed of by sale with the rest of his (Holthuyzen's) collections in 1793. Among the specimens sold was the Type-material of *Picus Namaquus* Lichtenstein, now unfortunately lost. Levaillant, *Histoire Naturelle des Oiseaux d'Afrique*, vol. vi, 1808, pp. 22–24, records having collected this woodpecker (Le Pic

à double moustache) in Caffraria, *i.e.*, the eastern Cape Province, in the latter part of 1782 (Grant, *loc. cit.*, p. 84) and makes no mention of having either shot or observed it during his later travels to Namaqualand. While it is now established that Levaillant did travel in Great Namaqualand, it is certain that he did not reach Damaraland. As *Th. namaquus* occurs sparingly in Great Namaqualand, there is nothing inherently unlikely in Namaqualand (as understood by Lichtenstein) being the correct provenience of at least some of the paratypes of *Picus Namaquus*. Much of the work of Levaillant is unreliable and often quite inaccurate, especially that produced many years after his return from South Africa, the sale of his collections, and his harrowing incarceration during the Reign of Terror, and he may well have collected material of the Bearded Woodpecker in Great Namaqualand, overlooking the fact when he compiled vol. vi of his *Oiseaux d'Afrique*. It is extremely unlikely that any material of this woodpecker available to European workers in 1793 could have come from Damaraland, which was then largely *terra incognita*, and on the basis of our knowledge of the travels of Levaillant, the original collector, and the data given by Lichtenstein, the describer, the type-locality of *Th. n. namaquus* should be Great Namaqualand, South-West Africa, and not Damaraland. I do not think that we can legitimately assume at this date that Lichtenstein did not have Namaqualand material, or, indeed, that any of the specimens available to him were necessarily those collected in the eastern Cape Province (Caffraria) by Levaillant.

Birds of the topotypical (Great Namaqualand) populations of *Th. n. namaquus* have the under-parts dull greyish green, coarsely and freely banded with vermicular bars of dull white, and the black auricular patches do not extend beyond the ear-coverts on to the sides of the neck. Comparable populations range throughout Damaraland, the northern parts of South-West Africa, and southern Angola eastwards through the northern Cape Province and the Bechuanaland Protectorate to parts of western Northern Rhodesia, Southern Rhodesia and the western Transvaal. Northern Angola and southern Belgian Congo birds have been placed with this race by Chapin and Peters in their respective works. Demonstrably different populations are to be found in the eastern lowlands of Portuguese East Africa, the eastern Transvaal, Swaziland and Zululand, the birds of which differ little in size but significantly so in series on ventral colour-characters from those of the interior and arid west of the sub-continent. In the reduced clarity and marked coalescing of the pectoral bars, and greyer, less greenish-tinged, ground colouration to the less coarsely barred under-parts, such populations adumbrate the major racial characters of *Th. n. saturatus*, *Th. n. schoënsis* and *Th. n. coalescens* (see below), in which the breast is largely unbarred, and of an olivaceous brown colour, flecked with dull white and some black. However, in the restricted nature of the black auriculars, the populations of the south-east African lowlands agree with topotypical nominate *Th. namaquus*. The question of the nomenclature to be used for this form is difficult to resolve. It belongs to a complex of eastern African populations exhibiting characters varyingly intermediate between the nominate race and those occurring in north-eastern and southern Africa in which the breast is dark, spotted and almost unbarred. The northern populations of this assemblage have been named *Th. n. decipiens*,

the range of which is given by Peters, *loc. cit.*, as "south-western Uganda and Kenya Colony from the Tana River and Nairobi, south to the north shore of Lake Edward and central Tanganyika Territory," but the southern ones are generally placed with *Th. n. namaquus*. The validity of *Th. n. decipiens* itself has been questioned, and Moreau, in 1936, relegated it to the synonymy of *Th. n. namaquus*, an opinion adopted by some later workers, but not by Peters and Chapin. I find that the nominate race of this woodpecker, as understood on the basis of the adequate recently taken South-West African material before me, does not range in to East Africa. Perhaps two racial groups of populations deserving of nomenclatural recognition inhabit eastern Africa from the region of south-western Uganda and southern Kenya Colony, south to southern Portuguese East Africa and Zululand, but I have insufficient material to attempt a worthwhile appraisal and delimitation of these at the present time. Until this can be done I prefer to leave the whole complex of populations in a single, perhaps composite, race under the name *Th. n. decipiens*.

Also meriting further study is the race *Th. n. schoënsis* as understood by most modern workers. It is clearly an unsatisfactory composite race, because I find the populations of British Somaliland to differ strikingly from those of northern and north-western Kenya Colony in being more strongly banded with white on the mantle and tertials, and markedly less saturated throughout. Peters, *loc. cit.*, strangely enough, does not include the Somalilands as being within the range of this woodpecker, but the species is recorded from these territories by other workers.

As noted earlier, Levaillant, in 1782, found the Bearded Woodpecker not uncommon in the eastern Cape Province, which has not been the experience of more recent collectors and observers. In his valuable summary of the known distribution of this species as at 1903, Selater, *Birds of South Africa*, vol. iii, 1903, p. 139, gives but a single Cape Province locality, *viz.*, near Port St. Johns, Pondoland. Since then little has been recorded of the species in the Cape Province, but during July, 1946, and April, 1957, Miss M. Courtenay-Latimer, Director of the East London Museum, and Mr. G. G. Smith, Chairman of the Museum Board, located several pairs of the Bearded Woodpecker in the valley of the Great Kei River, to the north-east of East London, where F. A. O. Pym had obtained it in August, 1910. A small series of four specimens (2 ♂♂, 2 ♀♀) was collected and has kindly been placed at my disposal for study. This material has been augmented by the loan of the Port St. Johns specimen — a ♀ taken by the late Captain Guy C. Shortridge on 21st November, 1901 — from the collection of the South African Museum.

The five eastern Cape examples of the Bearded Woodpecker before me differ strikingly from topotypical *Th. n. namaquus* in being much darker below, the white of the centre of the throat being less extensive and distinctly sullied by blackish tipping to the feathers and a brownish overall cast, while the black side streaks of the throat are correspondingly broader and extend further down on to the breast. The breast is almost unbarred and of a uniform dark olivaceous grey, flecked with dull whitish and black, and the rest of the under-parts is considerably darker than in *Th. n. namaquus*. There is little difference in the colouration of the upper-parts, except for a tendency for the females to have fewer white dots on the forehead, and forecrown, and for both sexes to be more spotted and less

barred on the mantle. There is no difference in size. It differs in a closely similar manner from *Th. n. decipiens*. This distinctive new race, which is described below as *Thripas namaquus coalescens* mihi, subsp. nov., ranges from about the valley of the Great Fish River eastwards to Pondoland and East Griqualand, and, perhaps, Natal. It appears to be a race of forested country with a comparatively high annual rainfall, whereas *Th. n. namaquus* and *Th. n. decipiens* are forms of the dry thornveld savannas in regions where the annual rainfall is considerably less.

The eastern Cape race, *Th. n. coalescens*, bears a remarkably close resemblance to the geographically distant *Th. n. schoënsis*, which is completely isolated from it by intervening populations of *Th. n. namaquus* and *Th. n. decipiens*. *Th. n. coalescens* differs only from Kenya Colony and Abyssinia *Th. n. schoënsis* in having the black auricular patches restricted to the ear-coverts and not extending down the sides of the neck, and in being rather less saturated on the upper-parts, wings and tails, but in the



Map showing the approximate ranges of the three South African races of the Bearded Woodpecker *Thripas namaquus* (Lichtenstein).

1. *Th. n. namaquus* (Lichtenstein)
2. *Th. n. decipiens* (Sharpe)
3. *Th. n. coalescens* Clancey

colouration of the under-parts the two races are inseparable. I have recently recorded further instances in African birds where the terminal forms at either end of race-chains are closely similar in their major morphological racial characteristics, notably in the barbet species *Buccanodon whytii* (Sharpe) (vide *Durban Museum Novitates*, vol. iv, 15, 1956, pp. 245 – 251) and in the Orange Thrush *Turdus gurneyi* Hartlaub (vide *Bull. B.O.C.* vol. lxxv, 6, 1955, pp. 70 – 78). The phenomenon, which I believe results simply from convergent evolution in most instances, is

also known to occur in still further polytypic species with extended race-chains in eastern and southern Africa.

Three racial groups of populations of the Bearded Woodpecker can be recognised as occurring within the confines of the South African sub-continent, two of which represent well-defined races with distinctive characters. The third group is of uncertain status, though clearly closely affiliated to similar populations that occur in southern Kenya Colony, Tanganyika Territory and neighbouring territories, which exhibit "intermediate" characters between the pale, bar-breasted nominate race of the South-West Arid biome, and the dark, almost uniform, breasted races of the regions to the north of the Congo forests, north-eastern Africa, and the eastern Cape Province and Natal in South Africa. The name *Th. n. decipiens*, which is applied to the populations of southern Kenya Colony, Tanganyika Territory and adjacent regions, by most workers, is here used for a whole complex of "intermediate" eastern African populations of this woodpecker pending a critical revision. The nomenclature, characters and ranges of the three South African races of *Th. namaquus* are as follows:

1. *Thripias namaquus namaquus* (Lichtenstein).

Picus Namaquus A. A. H. Lichtenstein, *Cat. rer. nat. rar.*, Hamburg, 1793, p. 17: Interior of South Africa. Type-locality here restricted to Great Namaqualand, South-West Africa.

Adult male: Forehead and crown sooty brown speckled with dull brownish white; occipital crest lustrous scarlet, nape black; rest of upper-parts umber brown with golden wash and transverse, undulating bars of yellowish white; ear-coverts black, sides of neck white; on under-parts, centre of throat white with slight greenish wash; lower throat, breast and rest of under-parts pale greyish green with coarse transverse vermicular bars of dull greenish white.

Female: Similar to the male but the upper surface of the head wholly glossy black, the forehead and crown dotted and streaked with white.

Wing-measurements: ♂♂ 133 – 136, ♀♀ 127.5 – 136 mm.

Type: None designated. Paratypical material now not in existence.

Range: South-West Africa (in Great Namaqualand scarce) and southern Angola eastwards through the northern Cape Province and the Bechuanaland Protectorate to parts of western Northern Rhodesia, Southern Rhodesia and western and northern Transvaal. Intergrades with the next race to the east and north-east of its stated range. Northern Angola and southern Belgian Congo birds are placed in this race by Chapin and Peters, but I have not attempted to verify this point.

Note: This race is characterized by the fact that the vermicular bars on the lower throat and breast are free and not coalescent.

2. *Thripias namaquus decipiens* (Sharpe)

Mesopicus decipiens Sharpe, *Journal of the Linnaean Society of London, Zoology*, vol. xvii, 1884, p. 430: Zanzibar — error, the *Type* being from the Shimba Hills, near Mombasa, coastal Kenya Colony.

Similar to the nominate race but rather darker, greyer, and with little or no greenish wash on the under-parts, and with a certain amount of fuliginous clouding on the breast. The ventral barring as a whole is finer than in *Th. n. namaquus*, imparting a somewhat darker and duller aspect to the under-parts. In the birds of the northern populations the blackish

auriculars often extend slightly beyond the ear-coverts (the influence of *Th. n. schoënsis*), but in the southern ones there is no such extension.

Wing-measurements: ♂♂ 126 – 137, ♀♀ 128 – 138 mm.

Type: In the British Museum (Nat. Hist.) London.

Range: From the region of Lake Edward, Belgian Congo, and south-western Uganda, southern Kenya Colony and Tanganyika Territory, south through Northern Rhodesia, Nyasaland and northern Portuguese East Africa to southern Portuguese East Africa, the eastern Transvaal "low-veld", Swaziland and Zululand.

Note: This race is characterized by the variable fuliginous clouding on the breast and the rather darker and greyer, less greenish washed, under-parts, when compared with *Th. n. namaquus*. As noted in the preliminary discussion, this complex of populations may ultimately require to be broken up into two or more races.

3. *Thripias namaquus coalescens*, subsp. nov.

Type: ♀, adult. Kei Bridge, on the Great Kei River, eastern Cape Province, 28th July, 1956. Collected by G. G. Smith. In the collection of the East London Museum. Museum Reg. No. 3377.

Diagnosis: A dark race closely resembling *Th. n. schoënsis* (Rüppell) of Abyssinia, northern Kenya Colony and adjacent regions, from which it differs in being rather less saturated on the upper-parts, wings and tail, and in having the black auricular patches restricted to the ear-coverts. In *Th. n. schoënsis* the white of the post-ocular and malar streaks does not link up on the sides of the neck, being broken by the extended black auriculars. Differs from *Th. n. decipiens*, as above defined, in having the black streaks to the sides of the throat broader and extending further downwards on to the sides of the breast; white on centre of throat duller, restricted and distinctly washed with brownish and flecked with black; breast almost unbarred and of a uniform dark olivaceous grey, irregularly marked with spots of dull white as well as some markings of blackish. Rest of under-parts darker and rather greener than in *Th. n. decipiens*. On upper-parts closely similar, but slightly darker and more inclined to be spotted than barred on the mantle. The female of *Th. n. coalescens* tends to have fewer white spots on the head top than either *Th. n. decipiens* or *Th. n. namaquus*. When compared with *Th. n. namaquus*, the differences are even more striking.

Wing-measurements: ♂♂ 129.5, 135, ♀♀ 128.5 – 131.5 mm.

Range: The eastern districts of the Cape Province from about the valley of the Great Fish River eastwards to Pondoland, East Griqualand and, perhaps, Natal.

Paratypical material: The Type and four paratypes.

Measurements of the Type: Wing (flattened) 128.5, culmen from skull 33.5, tarsus 20.5, tail 63 mm.

Note: This race differs from the other South African forms in the more dusky, less whitish throat, broader and more extensive black streaks to the sides of the throat, and dark, almost uniform, olivaceous grey breast, dotted with dull white and some black.

The two paratypical males of *Th. n. coalescens* have rather smaller scarlet occipital crests than either *Th. n. decipiens* or *Th. n. namaquus*, but it is not clear if this has resulted from undue constriction of the skin or loss of some of the feathers during preparation, or is an additional valid racial

criterion. However, the feathers in question appear to be naturally shorter in length, and the latter suggestion seems to me the more likely explanation.

A Generalised Infection due to an Acid-Fast Bacillus in the Common Buzzard, *Buteo buteo buteo* (Linnaeus)

by DR. JAMES M. HARRISON

Received 31st October, 1957

In May, 1957 I received from Professor K. H. Voous the extremely wasted cadaver of a female Common Buzzard, *Buteo buteo buteo* (Linnaeus) which had been found in a weak and moribund condition in the Naadermeer Nature Reserve on 14th May, 1957. The bird which could obviously not have recovered was destroyed and the skin preserved for the Zoological Museum, Amsterdam. The body was sent to me preserved in 10% formosaline, for histopathological examination.

On dissection the viscera of the abdominal cavity were seen to be heavily infiltrated with greyish white nodules varying from minute dots to lesions of almost a centimeter in diameter. Both lungs were extensively studded with the same type of lesion, while the following organs were macroscopically unaffected; ovaries, adrenals, kidneys, heart, nor was there any involvement of the osseo-ligamentous structures.

The accompanying table sets out the distribution of the nodules. In this * represents from one to a few discreet lesions, and **** a condition in which the normal tissue of the organ involved was largely replaced by deposits.

<i>Proventriculus</i>	*
<i>Gizzard</i>	*
<i>Small intestine</i>	*
<i>Large intestine</i>	*
<i>Liver</i>	****
<i>Lungs</i>	****
<i>Spleen</i>	****

From this table it can be seen that this infection, which morphologically is identical with avian tuberculosis, has its heaviest infiltrations in the abdominal organs and lungs. Histologically the picture presented by all the affected tissues is that of avian tuberculosis, the lesions showing typical giant-cell systems with caseation and, where advanced, widespread necrosis. The histological material was stained by the haematoxylin and eosin and Ziehl-Neelsen techniques. In the latter the demonstrable lesions showed large numbers of acid-fast bacilli, which morphologically resemble *Mycobacterium tuberculosis avium*.

Unfortunately as no unfixed material was available cultural investigations were not possible.

The distribution of the lesions clearly demonstrates the path of entry of the infection as being primarily *via* the gastro-intestinal tract, and secondarily a spread *via* the portal lymphatic and venous systems. The evidence of a blood-borne infection is provided by the massive involvement of the lungs in this case.

My thanks are due to Professor K. H. Voous for sending me the specimen and to Dr. Keith Randall, Consulting Pathologist, for permitting one of his Technicians, Miss Ann Fraser, to whom my thanks are also due to prepare the sections for me.

Tornado Effect on Birds

by DR. FRITZ O. ROSSMANN

Received 10th October, 1957

In the older tornado literature some unique observations on birds are reported. It would be interesting to meteorologists, if bird experts could contribute more recent, perhaps more detailed information. The following few reports are taken from first hand descriptions of tornadoes:

"Several of the fowls were picked almost clean of their feathers, as if it had been done carefully by hand."¹

"In other cases, however, forces seem to have acted with great violence upon individual parts of bodies. Numerous instances occurred, where hens were completely stripped of their feathers."²

"The stripping of fowls attracted much attention in this and other tornadoes."³

"Stripping feathers from fowls. The most singular fact is, that the fowl lives under the depluming process. In some cases roosters have been seen walking around, days after the tornado, crowing, and without a feather on their backs."⁴

The explanation given by H. A. Hazen seems to be the only one: "The appearance can be readily accounted for the supposition, that an electric charge threw off the feathers, and this seems the only way of explaining the stripping of clothes from a person."⁵ It is, however, hardly adequate. For the high voltages which would have to develop together with strong mechanical effects would certainly kill small animals. On the other hand, it is strange that we read only of walking birds, that have undergone such loss of feathers. Why should not flying birds and even fur bearing animals equally lose partly or completely their fur?

It could be that feathers offer a larger surface to the attack of the air, but it is more probable that atmospheric pressure differences join in play and therefore should be considered first of all. For, as a tornado moves up against an obstacle in its path, it produces a low pressure field around the object. The air pressure in the quills is assumed to remain constant, while the pressure around the animal suddenly drops by about 20 to 50 mb, resulting of necessity in an expansion of the quills. As the air stream of the tornado varies, the little pressure system set up around the location of the quills will loosen the feathers from the skin so that they are sheared off by the streaming and drag on the webs of the feathers. This is due to Bernoulli's principle, which, of course, is also responsible to the collapse of houses in the track of a tornado.

Have similar observations been made in modern time? Are they limited to domestic birds, which cannot escape; or have wild birds been found with their feathers sheared off?

¹ E. Loomis, Stow/Ohio Tornado, 20th Oct. 1837, American Journal of Science 33, 368 1837.

² D. Olmstead, New Haven Tornado, 31st July, 1839. American Journal of Science 37, 340 1839.

³ E. Loomis, Mayfield/Ohio Tornado, 4th February, 1842. American Journal of Science 43, 278 1842.

⁴ H. A. Hazen, The Tornado New York 1890, p.24

⁵ l.c. p. 24.

Notices

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Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1958

18th February, 24th March (jointly with B.O.U.), 15th April, 20th May, 16th September, 21st October, 18th November, 16th December.

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If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

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Communications are not restricted to members of the British Ornithologists' Club, and contributions on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

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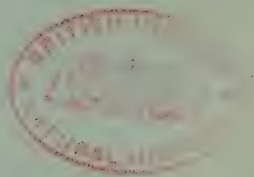
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OF THE

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- 4 MAR 1958



Edited by
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The five hundred and sixty-third meeting of the Club was held at the Rembrandt Hotel, S.W.7. on Tuesday, 18th February, 1958, following a dinner at 6.30 p.m.

Chairman : Mr. C. W. MACKWORTH-PRAED

Members present, 29; Guests, 7; Guest of the Club, Mr. Robert Spencer; Total, 37.

Bird Ringing

Mr. Robert Spencer, the Bird Ringing Secretary of the British Trust for Ornithology gave a most interesting talk illustrated with slides. A full account will appear in a subsequent Bulletin.

Pan African Ornithological Congress

A SYMPOSIUM HELD BY THE CLUB ON 17TH DECEMBER, 1957

After dinner many of the members of the Club who had attended the Pan African Ornithological Congress in Livingstone in July, gave some account of their activities in Africa. The Chairman emphasised that the Congress itself was a great landmark for all those interested in African birds and he paid tribute to the organisers, in particular Mrs. Mackie Niven, who had all along had faith in the ultimate success of this new venture.

Miss P. Barclay-Smith spoke first of meeting of the International Committee of Bird Preservation, which took place in Bulawayo before the Livingstone Congress. Representatives of ten nations attended the meeting and had valuable discussions on African problems of preservation with particular reference to the White Stork, Secretary Bird and the locust-like activities of the Queleas. She also paid tribute to the excellent organisation in Bulawayo by Mr. Reay Smithers and Miss Mary Patterson of the National Museum of Southern Rhodesia.

Mrs. B. P. Hall gave a short account, and some slides, of an expedition in the south-western Kalahari which she had undertaken with Mr. Smithers. The object of this expedition had been to collect and study the birds in the areas round Tsabong, Tsane, Lehututu, Kukong and Kakia where little or no ornithological work had been done previously.

Mr. Edwin Cohen followed with a description of the excursion to the Wankie Game Reserve, which was illustrated in turn by Mr. H. H. Davis with colour slides of both Wankie and of the Zambesi valley round Victoria Falls. These slides showed admirably the types of habitat found, and included some shots of guinea fowl and other birds typical of the Reserve.

Mr. R. E. Moreau showed some different habitat types with slides of the Luangwa valley. He commented in particular on the poverty of passerines in the dry season in the mopane woodland, and also on the fact that, in groves of evergreen forest along the valley some species such as Paradise Fly-catchers, normally local migrants, appear to be resident. Slides included some of typical water-birds and a colony of Wood Ibis ; he finished with views of Nyasaland emphasizing the isolation and consequent zoogeographical interest of such areas as the Zomba plateau.

The final speakers were Miss C. M. Acland and Miss V. Maxse who gave an account and short film of the post-congress excursion to the Lochinvar Ranch and the new Kafue National Park. The film gave some excellent views of the vast marsh of the Kafue flood plains with the herds of Red Lechwe and a profusion of water birds.

A New Honey-guide from the Kivu District, Belgian Congo

by DR. JAMES P. CHAPIN

Received 21st November, 1957

It was long believed that the smallest species of the genus *Indicator* was *I. exilis* (Cassin), of which the nominate race has wings only 65–79 mm. long, the tail 39–51 mm., and the culmen from base 8–10 mm. Within the past year we have been surprised to find that together with *Indicator exilis* in the highlands west of Lake Kivu there dwells another species of the genus, still smaller, differing in coloration, and with the beak markedly smaller. This dwarf honey-guide appears never to have been described, and for it I propose the name

Indicator pumilio, new species

Description: Rather similar to *I. exilis* in general coloration and similarly streaked on back, rump, and wing-coverts with fuscous and sulphine yellow, the remiges mostly with outer edgings of sulphine yellow. The inner edgings of the remiges are similarly light gray, but slightly more tinged with yellow ; the tail pattern virtually as in *exilis*. Adults of *pumilio* have the same white line running from the anterior lores to the vicinity of the nostrils, but do not show any blackish malar stripe such as is present in adults of both sexes of *exilis*. Sides of the head are greenish gray, and the crown more washed with green than in *exilis*, with half-hidden dusky striping. The chin of *pumilio* is yellowish white, washed or spotted with greenish gray; its underparts are somewhat deeper in colour than those of *exilis*, more washed with green on a gray ground, the breast and flanks showing

diffuse dusky striping which is no more than suggested in some specimens of *exilis*. Lower belly yellowish white, and under tail-coverts gray with edgings of whitish. Tibial feathering with stripes of fuscous or blackish, edges yellowish white.

The average dimensions of *I. pumilio* are smaller than those of *I. exilis exilis*. Five adult males of *pumilio* have wings 71–76 mm., tails 45–50 mm., culmen to base 8.5–9 mm. Six adult females have wings 64–67 mm., tails 41–44 mm., culmen to base 7.3–8 mm.

These figures may not seem to differ markedly from the dimensions of *I. exilis exilis*; but males of that species from the southwest side of Lake Kivu have wings 76–85 mm., tail 46.5–60 mm., culmen to base 9.2–10.5 mm. Females from the same area have wings 68–76 mm., tail 42–45.5 mm., culmen 9–10 mm. Such a population may be referable to the race *I. exilis pachyrhynchus*.

The difference in weights is much more diagnostic. Seven examples of *pumilio* from southwest of Lake Kivu weighed from 12 to 15 grams, whereas fifteen of *exilis* from the same vicinity weighed 14.5 to 22 grams. In each group males were usually the heavier, but the weight of individuals varies considerably with the amount of beeswax contained in the stomach. Whether viewed from above or from the side, the beaks of *pumilio* are always distinctly smaller than those of *exilis*.

Type: American Museum of Natural History, No. 648641, from Tshibati, altitude 6400 ft., lat. 2° 14' S., long. 28° 47' E., on the southwest side of Lake Kivu, Belgian Congo. Adult male, collected 11th May, 1957, by James P. and Ruth T. Chapin. Tshibati is a zoological station of the Institut pour la Recherche Scientifique en Afrique Centrale, situated above the central headquarters at Lwiro.

Range of *Indicator pumilio*: from the mountains just west of Lake Kivu southward at least to the highland of Itombwe, northwest of Lake Tanganyika, where on 30th June, 1908, Rudolf Grauer collected an adult male for the Rothschild Museum, and where Dr. Alexandre Prigogine has recently secured three more examples. Two of these Dr. Prigogine kindly lent us for comparison. Grauer's specimen was misidentified as *I. exilis*, and doubtless regarded as a young individual, although its tail pattern is that of an adult. It is now in the American Museum of Natural History.

At Tshibati we have collected juveniles of both *pumilio* and *exilis*, easily recognized by their more pointed outer rectrices with more v-shaped blackish tips. Those of *pumilio* differ by their more greenish underparts and brighter yellow edgings on upper side, also by their smaller dimensions, particularly those of the beak.

The very small beak of *Indicator pumilio* caused me to think at first that it might be conspecific with *I. meliphilus* (Oberholser), another rather small species, with wings 70–82 mm., tail 41–52 mm., culmen to base 7–9.2 mm. For the most part *I. meliphilus* inhabits less rainy regions than *I. exilis*. But the difference in coloration is so great, *meliphilus* being far lighter gray below, less streaked above, that I have been persuaded to name the new Kivu bird binominally. I still feel that its small beak may well indicate relationship with *meliphilus*. The latter is not a mere race of *I. exilis*. The ranges of *exilis* and *meliphilus* certainly overlap in the Mwini-lunga District of Northern Rhodesia, and probably also in Angola, the Upper Katanga, and western Keyna Colony.

Near Tshibati in the Kivu the species *pumilio* and *exilis* differ little if at all in behaviour. Both came to the very same pieces of empty waxcomb that we laid out to attract them, often near native beehives, within a hundred yards of our house. Both seemed equally silent at such times. We found it difficult to distinguish them in life with a field glass, for the young of *exilis* also lack the dusky malar stripe.

I wish here to express my gratitude to Dr. Alexandre Prigogine, Dr. Herbert Friedmann, Mr. R. E. Moreau, Mr. R. H. N. Smithers, Dr. Dean Amadon, and Dr. H. Schouteden for their help and advice and for the loan of certain specimens needed for comparison.

Further Population Studies of the Yellow Wagtail

by DR. ANDREW KEVE

Received 15th October, 1956, but held over until normal communication was restored with Hungary

Recently many studies have been made on the populations of the Yellow Wagtail, *Motacilla flava* Linnaeus, by Harrison (1945), Johansen (1946 & 1952), Drost (1948), Mayaud (1949 & 1953), Smith (1950), Grant & Mackworth-Praed (1952), Gladkow (1954), Williamson (1955), Schwartz (1956), Sammalisto (1956), etc. These studies have gradually disclosed the evolutionary problems connected with this species and provide one of the best examples of the complicated problems of a species-group which has been over-split and in which there are many intermediate forms.

I have investigated the Central European and Balkan populations of the Yellow Wagtail several times (1935, '36, '38, '39) and note that my results agree with those of others. My research, undertaken with E. Greschik, is based upon 728 specimens.

The population of the Carpathian Basin is of special interest to us, where the breeding race is *M. f. flava* Linnaeus. But the individual variation is wide and we were able to divide our 116 males into three groups. The first has very light ear-coverts, which are typical of the Hungarian population (31.1%). This group also have bills which become more slender from nostril to tip. This light phase, which is perhaps a steppe character, does not appear subspecific, because we have found comparable specimens from Scandinavia, Germany and Austria. Amongst these skins were some identified as *M. f. beema*, but we were fortunately able to show that they were pale variants of *M. f. flava*, in some cases with abnormal moult of the tail or with a tail shortened by faulty technique in preparing the specimen. The main bulk of the Hungarian population does not differ from Scandinavian material (44.8%). The minority (18.1%) have dark ear-coverts and are like *M. f. dombrowskii*. Fourteen specimens — supplementary to the main material — were identified as *M. f. flava* $\geq$ *dombrowskii*. These were collected in Transylvania, Banat, Batshka and in the vicinity of the Danube, not far north from 46°21'.

There were 21 skins of *M. f. dombrowskii* Tschusi from Hungary, a fact which proves that this race is regular on migration — probably Polish birds, but I did not see any Polish material. I even have specimens collected south of Banat in May and June. These are either late migrants or infiltrating breeders from the Roumanian plain, following the course of the Danube (*vide* Schwarz, The Relation of the Yellow Wagtail

Populations of the Camargue and Switzerland). I regard this race as very poorly differentiated and variable, making it difficult to recognise. However, on 54 skins I consider its description to be correct. British ornithologists would probably consider this race as part of a cline. It has colonised the territory of the black headed *feldeggii* group in the Delta of the Danube, as is substantiated by two specimens in the collection of Madarász (1909), which are *M. f. dombrowskii* $\geq$ *feldeggii*. By contrast, there is no intergradation with the Mediterranean grey-headed wagtails, because the black-headed *M. f. feldeggii* is interposed. *M. f. cinereocapilla* does not occur in the eastern part of the Balkans. Morphologically, *M. f. dombrowskii* and *cinereocapilla* are very close, therefore it is difficult to determine the origin of the former. Did the Mediterranean races at one time have contingent breeding terrain, which the black-headed group later penetrated from the south-east, partly though not successfully evolving a new race or was it the other way round? On the other hand, it may be an instance of parallel evolution in the Mediterranean forms. Unfortunately I have not seen Ivanow's work (1935), so I do not now know whether he had actual *M. f. dombrowskii* $\geq$ *feldeggii*, but the two specimens collected by Madarász prove that they occur in the Danube Delta (Keve, 1936). *M. f. dombrowskii* is nearest to *M. f. flava*, as is demonstrated by the Hungarian material. Gladkow expressed no opinion on this point, but by his distribution map we can see that he considered it as a synonym of *M. f. flava*.

I have recorded that *M. f. cinereocapilla* Savi breeds on the coast of the Adriatic, basing my opinion on the old literature and on two females collected by Madarász near Fiume during the breeding season. Mastrovic's opinion (1942) is that breeding was never proved north of central Dalmatia. This race also breeds in Albania, and Reiser (1933) considers that the birds mentioned by Ticehurst and Whistler (1932) are not *M. f. feldeggii*, but *cinereocapilla*. Gengler's skin from Macedonia is not *cinereocapilla*, but an aberrant *M. f. feldeggii* (Keve 1936). The western limits of its breeding terrain were fixed by Mayaud (1953).

Motacilla flava thunbergi: The twenty skins prove that this form is a regular migrant through Hungary in April and May, and possibly also in Thrace, where Dr. J. M. Harrison shot an example in May, 1935 and in Bulgaria, where one was shot in 1936. The race can be difficult to distinguish from the Mediterranean forms, but its small bill is a good differentiating character. Regarding Sammalisto's study (1956), I can confirm his results with 5 males and 5 females and also 6 typical *M. f. flava* from southern Estonia collected by Härms. These demonstrate the great variability of the Yellow Wagtail in the Baltic. I mention these skins under this race, but would note that they are somewhat brighter, their white superciliary stripe is well-developed and the shape of the bill is close to that of *M. f. dombrowskii*. The question is where do these two races meet? According to Domaniewski (1925), the northern limit of the breeding area of *M. f. dombrowskii* is Warsaw; according to Kumari (1954), *M. f. thunbergi* is a rare breeding bird in Estonia and *M. f. flava* breeds on the shores of the Baltic. It is quite possible therefore, that in the Baltic and north Poland there is a population which is an intergradation of the three forms *M. f. flava*, *thunbergi* and *dombrowskii*, and as this population migrates through Hungary, specimens occur which present great difficulties in identification.

Motacilla flava feldeggii: this race occurs only in the southern part of the Carpathian Basin, at Bănat and south Batshka as far as the Francis-Channel. The 33 skins taken between April and July suggest that occasional pairs breed there, but Gengler, Matvejew and Makatsch all agree that the northern limit of its usual breeding area is south Serbia, approximately as far as the town of Nish in the Morava valley. Recently occasional spring visitors have been observed further north — perhaps connected with the general extension of range of birds from the Morava valley. Thus it was seen near Szeged (1955), at the Tisza river, near Budapest and near the Danube (1953) and in the Kisbalaton (south Pannony, 1953, Warga). According to Mastrovic (1942), breeding has not yet been proved in Dalmatia, but it is a regular visitor there, as in Italy. My material consisted of 16 skins from Italy and 13 from Dalmatia and Corfu. Arrigoni (1904) regards the Black-headed Yellow Wagtail as only a casual visitor to Italy.

The following forms should be eliminated from the Hungarian Check-List:— *Motacilla flava beema* Sykes (= the light phase of *M. f. flava*, which also show some abnormal tail moult); *Motacilla flava lutea* Gmelin (= winter plumage of *M. f. dombrowskii*); *Motacilla flava taivana* Swinhoe (= abnormally moulting *M. f. flava*).

Such mistakes are occasioned by the abrasion of the greenish tips of the feathers of the crown, which is not always uniform. Between the greyish poppy-blue feathers are often some greenish ones, as well as some yellowish ones in the white eye-stripe. These feathers are longer and stronger and are not equally abraded. It is these birds which give rise to the “*taivana*” types in our populations and corresponding with this, there is the “*xanthophris*” type in the black-headed populations. In this connection, the private correspondence of Almásy and L. Lorenz-Liburnau for the year 1896 (Keve, 1939) is very interesting. Almásy made an exhaustive study of the Hungarian Yellow Wagtails (1899). There he has remarked on the resemblance of some skins to the asiatic subspecies, but would not agree to identify them as such. This is quite evident from the correspondence.

The plumage of juveniles and winter specimens indicate that some of the most primitive characters are shown by *M. f. taivna*. The “*Motacilla praeflava*” might have been like this. The Yellow Wagtails, segregated during the different glaciations of the Quarternary Period, became differentiated morphologically at a later time, the increasing temperature of post-glacial times favouring the extension of breeding range. The older groups have remained in their refuges, but the more recent mutations from “*Motacilla praeflava*” have colonised new breeding areas. The biological potentialities of the different races of Yellow Wagtail are therefore not equal. However they have not completely lost their “sexual compatibility”. This is proved by the intermediate nature of the specimen of *M. f. dombrowskii* $\geq$ *feldeggii* from the Danube Delta. On the other hand, see the examples of Grote (1937) and Drost’s study (1948) concerning *M. f. flava* and *flavissima* i.e. *M. f. lutea*.

Are some of the races of today mutations? I doubt it. I have based my opinion on the studies and *verbatim* reports of Jourdain, who showed clearly that the delayed migration of Yellow Wagtails is responsible for many mistakes. Migration in large flocks and common wintering grounds favours possible intergradation. The mixed flocks go far northwards. In the Kisbalaton (south-west corner of Lake Balaton) on April 13th, 1951 I

observed a flock, consisting of 15 – 18 males, in which many races were represented, but unfortunately I was unable to collect specimens. Now that we know more concerning the direction of migration of the Yellow Wagtail from ringing recoveries (Mayaud, Moreau, Spencer, Tait, L. Thomson, etc.), their taxonomic problems are going to be revealed in a different light. In Hungary, we have even had two recoveries from Italy. In this respect, I find myself in full agreement with the views of Williamson (1955).

I am very obliged to Dr. James M. Harrison for his kind help in the correction of my manuscript.

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Two New Races of Birds from the Maldive Archipelago

by MR. W. W. A. PHILLIPS AND MR. R. W. SIMS

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During the period December, 1956, to February, 1957, one of us (W.W.A.P.) visited islands in the Maldive archipelago. A small collection of 128 bird skins was made and observations on many species were recorded (Phillips and Sims, in press). The collection was presented to the British Museum (Natural History) and during the course of determination it became evident that the Maldivian populations of the Little Heron, *Butorides striatus*, and the Waterhen, *Amaurornis phoenicurus*, represented new races. Individuals of both these populations are characterised by having considerably more white in their plumage than birds of other populations of the same species. Fortunately several specimens of both were collected and the characters are found to be fairly constant. It is

probable that the increase in white may be correlated with habitat for in the Maldives both species are found on the exposed coral reefs and beaches with their dazzling-white sands. Elsewhere, they are usually to be seen either near mangroves and estuaries or in swamps and along rivers where it is muddy. In both cases birds with prominent white markings would be conspicuous on the mud so on the white coral sands the whiter plumage with its obliterative effect may be of selective value.

I

The Little Heron is of interest because the race *javanicus* Horsfield is remarkably constant in character in Ceylon and over a wide area of Asia yet geographical isolation has resulted in differentiation in the Chagos archipelago (*albolimbatus* Reichenow), in the southern Maldives (*albidulus* Bang) and in the northern Maldives which we now name:

Butorides striatus didii new race

Description: Nearest to *albidulus* Bangs but differs in having the forehead mainly white and the crown heavily streaked with white ; the neck and back are paler being a clearer silvery-grey where *albidulus* is pale buffy. All the wing feathers are edged with white instead of buff. The rectrices are also paler being mainly white with irregular dark patches. The underparts are correspondingly paler being a clearer silvery-grey.

Type: Adult male. Male Island, North Male Atoll, Maldive archipelago. 4th December, 1956. W. W. A. Phillips. Collector's No. 2. B.M.Reg.No. 1957.16.17.

Remarks: There are two adult and three immature males and four adult females in addition to the type. Six of the specimens were collected on the same island as the type, the others being taken on neighbouring islands on the same atoll. In series the amount of white is somewhat variable, one adult female (B.M.Reg.No.1957.16.24) has an almost white crown with only a few black streaks and one adult male (B.M.Reg.No.1957.16.26) has many white secondaries with only slight dark markings ; most have totally white tails. The immature birds are separable from a series of immature birds of *javanicus* from Ceylon by being generally paler and with clearly streaked crowns.

Range: Northern atolls of the Maldive archipelago. (Replaced by *B.s.albidulus* Bangs on the southern atolls).

Breeding: The Little Heron nests during November, December and January in small bushy trees growing near the beaches and swamps. The nest is concealed by foliage being built on a lateral branch about 8 to 12 feet from the ground. It is a simple unlined platform roughly constructed of small sticks and twigs. There are two eggs in the clutch. One clutch was examined ; the eggs were a pale green with a chalky wash and measured 39 x 29 and 40 x 29 mm. respectively.

General: Whatever the time of day the Little Heron is a feature of the beaches that surround Male and other islands. On the ebb tide many are usually seen sitting on knobs of coral and darting from time to time at small fish, eels and crabs nearby. As the tide rises they fly inland to the tops of palm trees or stand on the sea walls and exposed coral outcrops apparently asleep. In the fishery-harbour of Male, however, many resort to the fishing boats lying at anchor. They pass from boat to boat searching

for small fish and unused bait and have become quite tame. When flying between islands they generally fly low over the water with rapid wing-beats. The call is a loud, short 'yelp.' The Maldivian name for the bird is 'Rabonde'.

Acknowledgements: This race has been named after the Hon. Ibrahim Ali Didi, the Prime Minister of the Maldives, whose personal help made the expedition possible. We wish to express our gratitude to Mr. J. C. Greenway, Museum of Comparative Zoology, who generously sent us the unique type of *albidulus* Bangs. Finally, our thanks are due to Dr. D. Amadon, American Museum of Natural History, who kindly checked two of our series with material from the Chagos.

II

The Waterhen appears to be represented by a distinct race in each major island group, thus the separation of the population of the *Insulae maldivae* appears to agree with the general pattern of differentiation due to isolation observed throughout the species. The Maldivian bird we name:

Amaurornis phoenicurus maldivus new race

Description: Nearest to the nominate race but differs in the white of the forehead extending further over the crown and the back being less olivaceous and more slaty in tone ; on the sides of the breast and belly the black areas are reduced in size ; the flanks are paler being less rufous and more cinnamomeous in colour.

Type: Adult male. Hulule Island, North Male Atoll, Maldivian archipelago 22nd December, 1956. W. W. A. Philips. Collector's No. 56. B.M.Reg.No. 1957.16.31.

Remarks: There are three adult and one immature males and two adult and two immature females in addition to the type. Only four specimens were collected on the same island as the type but all were taken on the same atoll. In series the amount of white is variable ; one adult female (B.M. Reg.No.1957.16.34) apart from a trace of black on the nape has a white head and neck while one adult male (B.M.Reg.No.1957.16.30) has white secondaries and secondary wing-coverts. The black area of the sides of the breast and belly varies in width or is absent. The immature birds differ from those of *phoenicurus* Pennant by the more slaty colour of the back and the paler flanks.

Range: Maldivian archipelago. Resident in moderate numbers on most of the larger islands.

Breeding: Gadow and Gardiner (1903. *Faun. Geog. Maldive & Laccadive Arch.*, 1: 370) recorded taking a young bird from a nest in July ; one three-quarters grown chick was seen by W.W.A.P. in mid-January, 1957. Local inhabitants report breeding from May to September. Nests are built among pandanus scrub and thickets in swampy and overgrown areas.

General: It is an elusive, skulking bird living in the undergrowth around swamps and thickets near the beaches. Usually to be seen feeding on the beaches at low tide. Many appear to have become largely terrestrial and live away from water. A very noisy bird, especially in the early mornings, evenings and preceding rainstorms when its distinctive cry "Crooruwaka, crooruwaka" rings through the undergrowth. The Maldivian name is 'Cumbilli'.

Some Additional Notes on the Buzzard, *Buteo buteo trizonatus*

by DR. GUSTAF RUDEBECK

Received 30th October, 1957.

Two species of the genus *Buteo* breed in South Africa, viz., the large and short-tailed "Jackal Buzzard", *Buteo rufofuscus* (Forster 1798) and the small so-called "Mountain Buzzard", which until recently has been assigned to *Buteo oreophilus* Hartert & Neumann 1914. The type of *oreophilus* was collected in southern Abyssinia, and nowadays this form is known to be widely distributed in East Africa. However, a comparison between East African *oreophilus* and its South African counterpart revealed very considerable differences, and, hence, the latter form has been described under the name of *trizonatus* (Rudebeck 1957, with references). In recent years several authors have considered *oreophilus* a race of *Buteo buteo*, and, for reasons given in the above-mentioned paper, it seems appropriate to treat *trizonatus* in a similar way. Another possible course would be to retain both of them as species and rank *Buteo buteo* as a super-species.

In 1904 and 1905, C. H. B. Grant collected some small buzzards at Knysna and Plettenberg Bay in the Cape Province and close to Zuurbron in the Transvaal. These birds came to the British Museum, where Sclater (1912) identified them as "*Buteo desertorum*". In 1919, however, the same author was inclined to ascribe them to *oreophilus*, although he expressly remarked that they did not fit quite well with the description of this form.

Buteo buteo trizonatus was described on a series from the Transvaal Museum, Pretoria, and a few skins kept in other South African museums. By that time I had not yet seen the specimens collected by Captain Grant, but it was obvious from Sclater's comments that most or all of them must belong to *trizonatus* (Rudebeck l.c., p. 431).

In September, 1957, I had the opportunity to study the British Museum collections. Only five of the eight specimens mentioned by Sclater were found; as expected, all of them are *trizonatus*. Besides, there were four other skins of the same form, two of them previously belonging to the Norwich Museum collection. In all, therefore, the British Museum has got nine specimens of *trizonatus*. Their particulars are given in the following table.

Museum number	Locality, date, collector, &c.	Sex	Wing	Tail	Bare portion of tarsus
1955.6.N-20-2175	Norwich Castle Mus. Gurney coll. S. Afr. Dr. Smith.	♂ "imm"	352	185	37
1955.6.N-20-2197	Norwich collection. Knysna 13.1.1866 C. J. Andersson	♀	354	177	40
45.7.6.54	S. Afr. Sir A. Smith.	?	331	165	43
94.6.16.276	Burg Mount, Gordge, April 1878	♂	340	170	41(?)

1905.12.29.110	Knysna 26.1.1905 1400 ft. Grant.	♀	362	185	43
1905.12.29.111	Knysna 24.12.1904 Grant.	♀	360	187	damaged
1905.12.29.113	Plettenberg Bay, 6.3.1905 Grant.	♂	326	163*	41
1905.12.29.114	Zuurbron 1.5.1904 Grant.	♂	320	174*	36
1905.12.29.115	Zuurbron 13.5.1904 Grant.	♀	346	(173)	44

Additions and remarks to the table :
The sign * indicates that the figure is perceptibly affected by wear.
Figures in brackets indicate that the plumage is in moult.

The measurements of the bare portion of the tarsus are taken from the insertion of the lowermost feathers to the base of the middle toe ; it is often difficult to obtain exact figures in this case.

The length of the bill from cere to tip varies between 19 and 23 mm.

In olden days most of these specimens had been identified as “*Buteo desertorum*”, but later they were placed under *B. oreophilus*, except for the birds ex the Norwich collection, which I found in a series of *vulpinus*.

All of them show the colour pattern typical of *trizonatus*, i.e. comparatively pale brownish spots on upper breast and belly, but a broad zone on lower breast white and without spots or very nearly so, contrasting with the darker areas above and below. On the whole, the British Museum series consist of light-coloured birds with a very broad white zone. The specimens no. 45.7.6.54 and 1905.12.29.114 are extremely pale, even the lower belly being mainly whitish with a few small brown markings. There is always some, and usually much, chestnut on under wing-coverts, the last-mentioned bird (no. 114) being the only exception. Likewise, they show more or less rufous or chestnut on rectrices. The female from Zuurbron (no. 115) has a predominantly rufous tail ; the opposite extreme being no. 2197, in which only faint traces of rufous brown are visible. Tibial feathers are rather dark brownish with spots and edges of richer brown or chestnut, but very pale birds may show much white and only traces of rufous brown on tibiae. — In short, the original description holds good for this series as well, even if the range of variation can be slightly extended ; and specimens with a large amount of white underneath may be commoner than indicated by the series in South African museums.

Buteo buteo trizonatus was described on a series of 11 birds (3 males, 3 females, and 5 unsexed) from the Cape Province. Also available for study was one specimen without original label but said to be a female from Natal. Disregarding that bird but including the series in the British Museum I have now seen 14 sexed specimens, 7 males and 7 females. Their measurements are as under (worn plumage marked *) :

Males:

Wing 320, 326, 330, 337, 338, 340, 352. M₇ 335 mm.
Tail 163*, 170, 174, 174, 174*, 185, 185*. M₇ 175 mm.

Females:

Wing 331, 341, 346, 349, 354, 360, 362. M₇ 349 mm.

Tail 176, 177, 179, 181, 185, 187, 191. M₇ 182 mm.

Hence the females average larger than the males. Of course, a few specimens may be wrongly sexed (largest male and smallest female ?).

The specimen collected by C. J. Andersson, sexed as a female by the collector, also carries another label of later origin with the text, "probably ♂ though marked ♀". This remark, easily understandable on the assumption that the bird belonged to "*desertorum*", has no foundations nowadays. It is my belief, therefore, that the original sexing was correct.

Finally, it should be added that pale specimens of *trizonatus* may resemble the Madagascar Buzzard *Buteo brachypterus* Hartlaub 1860 in colour on under-parts ; but *brachypterus* can always be recognized by its very small dimensions, and its range of variation in colour is quite different from that of *trizonatus*.

The author is greatly indebted to Mr. Derek Goodwin and Mr. J. D. Macdonald for kind assistance at the British Museum of Natural History in London.

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Sclater, W. L., 1912: "On the Birds collected by Mr. Claude H. B. Grant &c." Ibis, ser. IX, vol. 6, p. 12.

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Polytypic Variation in the Sparrow *Passer melanurus* (Müller)

by MR. P. A. CLANCEY

Received 15th October, 1957

The Cape Sparrow or Mossie *Passer melanurus* (Müller) is a handsome and common but somewhat unevenly distributed species of south-western Africa, ranging in the west from the Cape of Good Hope northwards to Benguela, Angola, and in the east to the border country of Southern Rhodesia and the Bechuanaland Protectorate, and the northern Transvaal. Demonstrable geographical variation in the species has been on record for many years, and two races are currently recognised, these being *P. m. melanurus* (Müller), 1776: Cape of Good Hope, and *P. m. damarensis* Reichenow, 1902: Windhoek, South-West Africa (*vide* Sclater, *Systema Avium Aethiopicarum*, part ii, 1930, p. 722 ; Roberts, *Birds of South Africa*, 1940, p. 334 ; Vincent, *Check List of the Birds of South Africa*, 1952, p. 113). A recent study of most of the specimen material housed in South African collections has demonstrated the necessity for recognising a third race in our systematic arrangement of the species, and this is formally described below. For the loan of material I am grateful to the Directors of the South African Museum, Cape Town (through Dr. J. M. Winterbottom); East London Museum ; Natal Museum, Pietermaritzburg ; Transvaal Museum, Pretoria ; and the National Museum of Southern Rhodesia, Bulawayo.

Polytypic variation in *P. melanurus* appears to be strictly orthodox, the largest and darkest coloured birds occurring in southern and south-eastern high rainfall areas, the smallest and palest in the western and central desert and peripheral arid regions. Birds agreeing nomenclaturally

with the topotypical populations of *P. m. melanurus* range throughout most of the Cape Province to the south of the Orange River and into the southern Orange Free State. In this race, males in fresh plumage have the crown, cheeks, throat and breast sooty black, the nape and mantle centre dark olive-brown with an admixture of black, the scapulars lower back and rump hazel, and the sides of the body and flanks strongly washed with grey. Females are much less strikingly plumaged than the males, the head-top being about the Chaetura Drab of Ridgway (*Color Standards and Color Nomenclature*, 1912, pl. xlv), while the nape and mantle are similarly coloured but slightly paler, and the cheeks, throat centre and upper breast-band are dark greyish. In these populations the wings of males measure 73.5 – 82 mm., females 70 – 80 mm. In the north-western Cape (from about Port Nolloth and Springbok eastwards to Kenhardt and Prieska (intergrades), South-West Africa, south-western Angola, northern Cape Province, Bechuanaland Protectorate, parts of the western Orange Free State and the western and northern Transvaal, occur fairly uniform populations of rather smaller and lighter coloured birds, which have been given the name *P. m. damarensis* by Anton Reichenow. *P. m. damarensis* averages slightly smaller than *P. m. melanurus* (wings of males 74 – 79.5, and females 73 – 79 mm. in South-West African and Bechuanaland specimens), and males differ in having the nape and mantle centre lighter, the olive-brown without a black admixture, while the black surfaces are more brownish sooty, and the flanks are less strongly washed with grey. But the females show better subspecific differences than the males, being much lighter, less drab grey, on the head-top, nape and mantle centre than *P. m. melanurus*. The throat centre and breast-band are almost constantly more pallid, and the scapulars, lower back and rump are tawny and not hazel. In *P. m. damarensis* to a greater extent perhaps than in *P. m. melanurus*, the plumage of the upper-parts fades rapidly, and breeding birds have the scapulars, lower back and rump several degrees paler than freshly moulted examples. Towards the end of the breeding season, the surfaces concerned have often bleached to a sandy fawn.

The exact zone of contact between the races *P. m. melanurus* and *P. m. damarensis* is not easily plotted, as material from many crucial areas is not available. However, during the recent Durban Museum expedition (August – September, 1957) to the northern Cape Province and central Orange River valley, sampling of several local populations of *P. melanurus* was carried out. A series of 13 ♂♂, 8 ♀♀ from Riverton, near Kimberley, is almost constantly of the race *P. m. damarensis*, but in a series of 6 ♂♂, 3 ♀♀ from the Asbestos Mountains (Griquatown – Niekerkshoop road) the influence of the austral *P. m. melanurus* is clearly demonstrated in one or two specimens. At Prieska, on the central Orange River, most of the specimens collected (8 ♂♂, 3 ♀♀) are best placed with *P. m. melanurus*, but the population is clearly an intergrading one. A similar set of circumstances obtains at Van Wyks Vlei, some 90 miles to the south-west, from which locality I have a series of 6 ♂♂, 2 ♀♀, but at Kenhardt (5 ♂♂, 5 ♀♀) the birds are again lighter coloured, and attributable to *P. m. damarensis* in most instances. The data available suggest that the zone of intergradation between *P. m. melanurus* and *P. m. damarensis* is a comparatively narrow one.

South-east of the ranges of *P. m. melanurus* and *P. m. damarensis* occur populations of birds which differ significantly in size and colouration.

The populations of the south-east African highland grassland biome, in Basutoland, eastern Orange Free State, Natal, western Swaziland and the southern Transvaal, have hitherto been associated with the nominate race, but I now find them to be sufficiently well differentiated as to be placed as a new subspecies. The eastern birds under consideration are large, the wings in males 80.5 – 86, females 77 – 82 mm. The males are more strikingly contrasted in colouration than in either *P. m. melanurus* or *P. m. damarensis*, with the melanic surfaces a more glossy jet, less sooty, black, and the rest of the under-parts purer white, the flanks only lightly washed with grey. The nape and mantle centre are a darker and purer grey, while the lesser wing-coverts, scapulars, lower back and rump are a darker and more saturated vinous chestnut. The females are also darker on the upper-parts than *P. m. melanurus*, but ventrally they differ but little. For this new race of Cape Sparrow the name *P. m. vicinus* mihi, subsp. nov., is introduced below.

Three races of the sparrow *Passer melanurus* (Müller) can be conveniently recognised in our taxonomic arrangement of the species, and the nomenclature, characters and ranges of these are as follows:

1. *Passer melanurus melanurus* (Müller)

Loxia melanura P. L. S. Müller, *Des Ritter C. von Linné . . Natursystems Supplement*, 1776, p. 153: Cape of Good Hope, Cape Province, South Africa.

Male: Crown, cheeks, throat and breast-band sooty coal-black; post-ocular stripes, sides of neck and remainder of under-parts dull white, the sides of the body and flanks washed with olivaceous grey. On upper-parts, nape and mantle centre olive-brown with strong admixture of black; lesser wing-coverts, scapulars, lower back and rump hazel (about 00S-5-10°). Wings blackish, with prominent whitish median bar, a less conspicuous bar on secondary coverts, and pale margins to the tertials. *Female*: Paler coloured than the male, and with the crown, cheeks, nape and mantle centre of a colour about Chaetura Drab, darkest on the crown. On the under-parts, the throat and breast-band are dark greyish, and the white of the post-ocular stripes, neck sides and the lower ventral surfaces is more washed with buff than in the male.

Measurements: 20 ♂♂: wings (flattened) 73.5 – 82 (78.8), culmens (from base) 13 – 15.5 (14.6), tails 55 – 54 (59.1) mm. 15 ♀♀: wings 70 – 80 (75.1), culmens 13 – 16 (14.4), tails 52 – 60 (56.5) mm. Thirty-five specimens measured.

Type: None in existence.

Material: 78: South-western Cape Province (Cape Town, Dassen Island, Durbanville, Malmesbury, Stellenbosch, Hermanus, Bredasdorp, Touws River, Worcester), 21; central Cape districts (Graaff-Reinet, Van Wyks Vlei, Hanover, Prieska), 24; southern Cape (Oudtshoorn, Willowmore), 2; eastern Cape (Tarkastad, Cathcart, Committees Drift (Albany), Aliwal North, etc.), 29; Orange Free State (Glen, on Modder River), 2.

Range: South-western and western Cape Province to the south of Little Namaqualand, eastwards through the arid central and southern districts to the eastern Cape and southern Orange Free State. In the Cape Province reaching as far north as Prieska and, perhaps, Hopetown on the Orange River.

Note: Some examples with rather long wings, *i.e.*, in excess of 82 mm. in adults males, and of dark colouration, occur in the populations of the winter rainfall areas of the south-western Cape Province, but the majority is similar in these respects to the birds of the other populations of this race, and I do not feel that further subdivision of *P. m. melanurus* is warranted.

2. *Passer melanurus damarensis* Reichenow

Passer arcuatus damarensis Reichenow, *Ornithologische Monatsberichte*, vol. x, 1902, p. 77: Windhoek, Damaraland, South-West Africa.

Similar to the nominate race, but male with black surfaces more sooty, less coal-black; nape and mantle centre paler olive-brown, which is without blackish admixture; lesser wing-coverts, scapulars, lower back and rump slightly paler, and flanks only lightly washed with greyish. Female more sharply differentiated, having the crown, nape and mantle centre olivaceous wearing to light grey, not Chaetura Drab, and with the scapulars, lower back and rump tawny and not hazel. On the under-parts, the throat and breast-band paler, often quite creamy, and distinctly less dark grey. Averaging slightly smaller in size.

Measurements: 20 ♂♂: wings (flattened) 74 – 79.5 (76.4), culmens 13.5 – 15 (14.2), tails 54 – 62 (57.5) mm. 14 ♀♀: wings 73 – 79 (75.7), culmens 13.5 – 15 (14.4), tails 53 – 59 (56.7) mm. Thirty-four specimens measured.

Type: In the Zoological Museum, Berlin.

Material: 69: South-West Africa (Seeheim, Helmeringhausen, Windhoek, Swakopmund). 10; Bechuanaland Protectorate (Tsane, Tsabong, Lehututu, Francistown, 55 miles W. of Kanye), 7; northern Cape Province, (Kuruman, Riverton, Kimberley, Griquatown-Niekerkshoop road), 32; north-western Cape Province (Bladgrond, Kenhardt), 11; western Transvaal (Bloemhof, Marico, near Pretoria), 9.

Range: South-western Angola, South-West Africa and Little Namaqualand eastwards to the Southern Rhodesia – Bechuanaland border country, the western and northern Transvaal, and some districts of the western Orange Free State. Intergrades with the former race to the south of its stated range, and with *P. m. vicinus* to the south-east.

3. *Passer melanurus vicinus*, subsp. nov.

Type: ♂, adult. Bethlehem, eastern Orange Free State, South Africa. Altitude 5500' a.s.l. Collected by M. O. E. Baddeley, 28th July, 1955. In the collection of the Durban Museum.

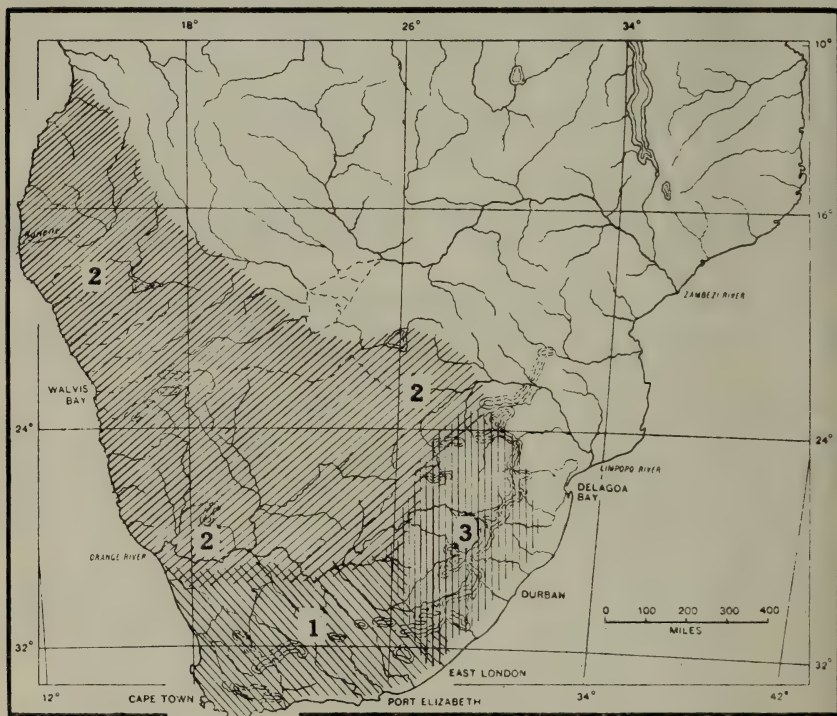
Diagnosis: Male similar to but more strikingly coloured than that of the nominate race, the crown, cheeks, throat and breast-band a more glossy jet, less coal, black, and under-parts purer white; the sides of the body and flanks less washed with olivaceous grey; and the lesser wing-coverts, scapulars, lower back and rump a darker and more saturated vinous red-brown (about 00S-5-7°). Ranging larger in size – wings of ♂♂ 80.5 – 86 mm. as against 73.5 – 82 mm. in *P. m. melanurus*. Females are also darker on the upper-parts, and larger in size, thus: wings 79 – 82 mm., as against 70 – 80 mm. in *P. m. melanurus*.

Measurements: 16 ♂♂: wings 80.5 – 86 (83.2), culmens 14.5 – 16 (15.2), tails 61 – 65 (62.5) mm. 4 ♀♀: wings 77 – 82 (79.7), culmens 14.5 – 15.5 (15.1), tails 59 – 63.5 (61.1) mm. Twenty specimens measured.

Material: 26. Eastern Orange Free State (Bethlehem), 3 ; Basutoland (Mamathe's, near Teyateyaneng), 4 ; southern Transvaal (Pretoria, Johannesburg, Henley-on-Klip, Kendal), 12 ; Natal (Bergville, near Pietermaritzburg), 7.

Measurements of the Type: Wing 84.5, culmen 14.5, tail 61.5 mm.

Range: The eastern half of the Orange Free State, the highveld districts of the southern Transvaal, western Swaziland, Basutoland, Natal (absent from the coastal districts), and East Griqualand, eastern Cape Province.



Passer melanurus (Müller)

Sketch map showing the approximate ranges of the three races of the Cape Sparrow or Mossie.

1. *Passer melanurus melanurus* (Müller)
2. *Passer melanurus damarensis* Reichenow
3. *Passer melanurus vicinus* Clancey

Ornithological Nomenclature and Nomenclatorial

Procedure

At the time of his death Captain Claude Grant had just completed a comprehensive treatise on this subject on which he was a great authority. It will be published by some of his friends and notice of this is being given so that anyone who wishes may be enabled to subscribe towards it.

Notices

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Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1958

24th March (jointly with B.O.U.), 15th April, 20th May, 16th September, 21st October, 18th November, 16th December.

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Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

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The five hundred and sixty-fourth meeting of the Club was held jointly with the B.O.U. at the Natural History Museum, South Kensington, on Monday, 24th March.

Chairman: DR. W. H. THORPE

Bird Ringing

by MR. ROBERT SPENCER

Summary of a talk given to the Club in February, 1958

The number of birds ringed under the national bird-ringing scheme is increasing rapidly and the annual total is now in the region of two hundred thousand. This has led to a corresponding increase in the rate at which recovery records are accumulating and for certain species we may now contemplate much more detailed and varied analyses than were possible before the war.

From the earliest days of the scheme the main emphasis has generally been on the study of migration and this, of course, remains a primary object of ringing. Experience has shown that the value of ringing in this respect varies considerably from species to species, depending on the percentage of birds recovered and whether the distribution of the recoveries in space and time is representative. At least three factors influence the proportion of useful recoveries reported for each species:

- (i) *Size.* The recovery rate tends to be directly proportional to the size of the bird — and of the ring.
- (ii) *Relationship to man.* The recovery rate is higher for species which are of sporting or economic importance to man. Sometimes, as in the case of birds caught in fishing trawls, the relationship is entirely unintentional. Because of local practices the recovery rate may vary in different parts of the range of a species.
- (iii) *Habitat.* Species frequenting urban areas of human habitations tend to show a higher recovery rate than strictly rural species.

The operation of all these factors may be seen in the fact that, with the exception of the Sulidae, Laridae and Hirundinidae, there is barely a handful of recoveries for the whole of Africa, where there is the additional complication of a largely illiterate population. In the study of migration, therefore ringing may be of very limited value in tracing the wintering or breeding area of individuals of many species, but invaluable in the study of such problems as movement in relation to age, routes followed, the

speed of migration, and the influence of weather upon the migrating bird.

The second object of ringing is the investigation of population dynamics, and this aspect seems likely to increase in importance. The large numbers of recoveries of certain common species, especially when coupled with suitable field projects, permit detailed studies of breeding biology mortality, etc., and it is this type of analysis which is more likely to have useful economic applications.

Up to now aluminium has been used in the manufacture of rings because of its lightness, but it shows poor powers of resistance to corrosion and abrasion and is less durable than some of the birds themselves. This is particularly so in the case of many sea-birds. Thus, rings on Kittiwakes (*Rissa tridactyla*) Cormorants (*Phalacrocorax carbo*) and Oystercatchers (*Haematopus ostralegus*) may become illegible in less than three years. So long as the main interest is in migration this inadequacy of the rings is not a serious disadvantage for in many respects the most informative recoveries are those occurring in the season of ringing or that immediately following, but for mortality studies it may prove an insuperable handicap. Research is therefore being undertaken to find a more suitable alloy for use in ring manufacture.

On *Barbatula bocagei* Sousa, 1886: Caconda, Angola

by MR. P. A. CLANCEY

Received 31st October, 1957

Grant and Mackworth-Praed, *Bull.B.O.C.*, vol. 76, 9, 1956, p. 159, show that *Barbatula bocagei* Sousa, *Jorn.Ac.Real.Sci.Lisboa*, vol. 11, 1886, p. 158: Caconda, Angola, is a juvenile Black-collared Barbet which has lost the red colour on the head and throat through having been in spirit. Arising from this finding they place *B.bocagei* in the synonymy of *Lybius torquatus torquatus* (Dumont), 1816: eastern Cape Province, South Africa. Recently, Benson and White, *Check List of the Birds of Northern Rhodesia*, 1957, Appendix 4, p. 159, have suggested that *B. bocagei* is an earlier name for the race currently designated *L.t.congicus* (Reichenow), 1898: Malanje, Angola. Reference to my revision of the races of this barbet in the *Durban Museum Novitates*, vol. iv, 17, 1956, pp. 273-280, will show that *B.bocagei* is an available name for a distinguishable, but at present innominate, group of populations, closely allied to the typical race, which are resident in parts of western and south-western Angola. As demonstrated in my revision on the basis of new material collected in Angola by Gerd Heinrich and loaned to me by the Chicago Natural History Museum (through Dr. A. L. Rand), *L.t.bocagei* differs from *L.t.torquatus* in having less red on the forehead, darker, browner and more coarsely vermiculated mantle and rump, the greenish wash absent, and a less copiously freckled under-surface. The vicinal race, *L.t.congicus*, differs in having the red on the head and throat more crimson, less scarlet, the mantle and rump greener, and the lower under-parts more strongly yellowish. In size *L.t.bocagei* and *L.t.congicus* appear to be about the same. Though closely allied, *L.t.bocagei* and *L.t.torquatus* are completely isolated from one another, both by vast stretches of unsuitable country and interposed populations of other races (*L.t.congicus* and *L.t.lucidiventris*).

Special General Meeting

Chairman: C. W. MACKWORTH-PRAED

This was held at the Rembrandt Hotel, Thurloe Place, S.W.7. on Tuesday, 18th February, 1958 at 5.45 p.m.

The following Resolutions were duly passed:—

RESOLUTION

- (i) That the Rules of the Club be amended by the deletion of Rule 12 and the addition of the following Rules:

“ 12. (a) Any stocks shares or other securities or money from time to time bequeathed or given to the Club shall be vested in trustees for the Club unless in any particular case the Club shall by a special resolution otherwise decide, and any other securities, money or other property (whether real or personal) from time to time belonging to the Club may be vested by or with the consent of the Committee in trustees for the Club.

(b) Any property to be vested pursuant to this Rule in trustees for the Club shall be paid or transferred to or vested in, deposited with or otherwise placed under the control of trustees or a bank or other trust corporation to be held upon such trusts for the benefit of the Club and with or subject to such powers and other provisions as may be approved by a special resolution of the Club and declared by or contained in a formal deed, including provision for the purchase out of the trust funds of a house or other building, land or other property for the use for all or any of the purposes of the Club.

(c) The Committee may pay to any bank or other trust corporation so appointed such remuneration for acting as trustee for the Club as may from time to time be agreed between the Committee and the trustee.

AMENDMENT OF RULES

“ 13. These Rules or any of them may be revoked or amended and any new rule or provision may be substituted or added by a special resolution.

“ 14. In these Rules “a special resolution” means a resolution passed by a majority of not less than three fourths of the members voting thereon at a general meeting of the Club of which not less than two weeks’ notice specifying the intention to propose the resolution as a special resolution has been given.”

SPECIAL RESOLUTIONS

- (ii) That in exercise of the powers conferred by Rule 12 the sum of £1,399 11s. 0d. 3½% War Stock now belonging to the Club shall forthwith be transferred to trustees for the Club and that that

investment and any other property, real or personal, which may hereafter be transferred to or vested in deposited with or otherwise placed under the control of trustees for the Club shall be held upon such trusts for the benefit of the Club and with or subject to such powers and provisions as are declared or contained or proposed to be declared or contained by or in the Trust Deed submitted to the meeting and initialled for the purposes of identification by the Chairman, and that such trusts powers and provisions be approved accordingly ;

- (iii) That Lloyds Bank Limited be appointed as first trustee under and for the purposes of the said Trust Deed ;
- (iv) That the Chairman and the Honorary Treasurer of the Club be authorised to execute the said Deed on behalf of themselves and all other members of the Club.

THIS TRUST DEED is made this Twenty-seventh day of February, 1958 BETWEEN CYRIL WINTHROP MACKWORTH-PRAED of "Castletop" Burley near Ringwood, Hants, CEDRIC NORMAN WALTER of Finsbury Pavement House, 120 Moorgate in the City of London of the one part and LLOYDS BANK LIMITED whose head office is at 71 Lombard Street in the City of London (hereinafter called "the Bank") of the other part ;

WHEREAS a club, known as "The British Ornithologists' Club" and hereinafter referred to as "the Club", was founded in or about the year One thousand eight hundred and ninety two having for its objects the promotion of scientific discussion between members of the British Ornithologists' Union and others interested in ornithology and to facilitate the publication of scientific information connected with ornithology ;

AND WHEREAS in accordance with the Rules of the Club the affairs of the Club are managed by a Committee consisting of the Chairman of the Club, the Treasurer, Secretary and other officers and four other members of the Club and the said C. W. Mackworth-Praed and C. N. Walter are respectively the Chairman and the Treasurer of the Club ;

AND WHEREAS at a special general meeting of the Club duly convened and held on the Eighteenth day of February, 1958 it was resolved

that the sum of £1,399 11s. 0d. 3½ % War Stock now belonging to the Club be forthwith transferred to trustees for the Club and that that investment and any other property real or personal which may hereafter be transferred to or vested in, deposited with or otherwise placed under the control of trustees for the Club shall be held upon such trusts for the benefit of the Club and with or subject to such powers and provisions as are declared or contained or proposed to be declared or contained by or in this Deed (which was submitted to and approved at the meeting and initialled for the purposes of identification by the said Cyril Winthrop Mackworth-Praed the Chairman of the Meeting), and that the Bank be appointed as first trustee under and for the purposes of this Deed,

and the Chairman and the Treasurer of the Club were authorised to execute the Deed on behalf of themselves and all other members of the Club ;

AND WHEREAS the Bank have consented to act as trustee under and for the purposes of this Deed :

NOW THIS DEED WITNESSETH AND IT IS HEREBY AGREED AND DECLARED by and between the parties hereto of the first part on behalf of themselves and all other members of the Club and the Bank as follows :—

1. IN this Deed unless the context otherwise requires

“the Trustees” means the Bank or other the trustee or trustees for the time being under this Deed,

“the Committee” means the persons for the time being members of or purporting to act as the Committee of the Club or otherwise for the time being having the management of the affairs of the Club, and

“the Treasurer” means the Treasurer for the time being of the Club or any person authorised by a resolution of the Committee to act as Treasurer during a vacancy in the office of Treasurer or by reason of the absence or incapacity of the Treasurer.

2. ANY property, whether real or personal, which may hereafter be paid or transferred to, vested in, deposited with or otherwise placed under the control of the Trustees by the Treasurer or any other officer of the Club or by any other person with the consent or at the direction of the Committee, whether by way of gift or otherwise, and any income arising from any money or other property from time to time held by the Trustees under this Deed shall be held by the Trustees upon trust for the Club subject to the trusts, powers and provisions hereinafter declared or contained.
3. (1) Subject to any conditions subject to which any particular property may be vested in them, the Trustees shall hold any real property for the time being vested in them under this Deed upon trust to sell the same, and any personal property for the time being so vested in them upon trust to call in, sell and convert into money such part thereof as may not consist of money, but the Trustees shall have power to postpone the sale and conversion of any such property for such period as they without being liable to account may think proper.
(2) Real or personal property may be vested in and held by the Trustees under this Deed subject to conditions as to the purposes or manner in which such property is to be used or applied, Provided that the Trustees shall not accept any property subject to any such conditions, unless the conditions shall have been approved by the Club in general meeting or the Committee.
(3) Subject to the foregoing provisions of this Clause and to any conditions subject to which any particular property may be vested in them, the Trustees shall pay to the Treasurer any income arising

from any money, investments or other property from time to time held by the Trustees under this Deed, and may apply any money representing the capital so held by them or any part thereof for such purposes of permanent or lasting benefit as the Club may from time to time in general meeting approve.

4. (1) The Trustees may invest in their names or under their control any moneys for the time being held by them under this Deed and not immediately required for the purposes of the Club in any investments for the time being authorised by law for the investment of trust funds, and may from time to time realise any investments so made, and re-invest the net proceeds in others of a like nature.
(2) The Trustees may, with the approval of the Club in general meeting, apply any money held by the Trustees under this Deed in the purchase and in paying the expenses of the purchase of and making improvements in or alterations to any house or other building land or other property in England or Wales, with or without any usual appurtenances thereto, for the use for all or any of the purposes of the Club, and any land so acquired may be freehold or leasehold, whereof not less than 40 years is unexpired at the time of purchase (with power to effect and maintain sinking fund policies), and the property so purchased shall be conveyed or assigned to and vested in the Trustees upon trust, with the previous approval of the Club in general meeting, to sell the same with full power to postpone the sale, and, until sale as aforesaid, the Trustees may permit the property so purchased to be used for all or any of the purposes of the Club.
5. (1) The Bank shall be the first trustees under this Deed.
(2) Except so long as a Bank or other trust corporation are the Trustees, the number of trustees under this Deed shall not be less than three.
(3) The power of appointing new trustees under this Deed, whether to fill a vacancy caused by the death, retirement or removal of a trustee or as an additional trustee, shall be vested in the Committee and exercisable by a resolution of the Committee, and effect shall be given to any such resolution by an instrument in writing under the hand and seal of the Chairman or the Secretary or other officer for the time being of the Club.
(4) The Trustees or any of them may retire from the trusts hereof on giving not less than one month's notice in writing of his or their intention so to do to the Chairman or the Secretary or other officer for the time being of the Club, and upon the expiration of such notice the trustee giving the notice shall cease to be a trustee under this Deed.
(5) If the Club in general meeting shall at any time by resolution decide that it is desirable that the Trustees or any of them should cease to be trustees or a trustee under this Deed, and notice to that effect signed by the Chairman or the Secretary or other officer for the time being of the Club shall be given to the Trustees or that

trustee, the Trustees or that trustee shall forthwith on the giving of such notice cease to be trustees or a trustee under this Deed.

6. THE Bank or any other trust corporation for the time being acting as a trustee under this Deed shall be entitled to charge and be paid such remuneration for their services as trustees under this Deed as the Public Trustee would from time to time have been entitled to charge, if he had been appointed Custodian Trustee under this Deed, Provided always that the Bank shall be entitled to charge a minimum annual fee of Three Guineas.
7. THE Trustees shall keep proper accounts of all money received or other property for the time being vested in or held by them under this Deed, and of any payments made or expenses incurred by them under or for the purposes of this Deed, and (if and so long as the Trustees shall not be a trust corporation) once at least in every year such accounts shall be examined and audited by the auditors for the time being of the Club, and as soon as practicable after the 31st day of December in every year or such other date as may be determined by the Committee the Trustees shall present to the Committee a copy of the accounts for the period from the date to which the last audited account so presented shall have been made up, or, in the case of the first account, from the date of this Deed, and a copy of the auditors' report on such accounts.
8. THE Trustees may decline to accept the transfer of any property of any kind involving or likely to involve the owner thereof in personal liability.
9. THE Trustees may with the previous approval of the Club in general meeting at any time by an instrument in writing under seal revoke or alter all or any of the trusts, powers and provisions herein contained, or add any new trusts, powers and provisions, whether applicable to any particular property held by the Trustees or generally, Provided that the purposes for which any money representing capital for the time being held by the Trustees under this Deed may be applied under Clause 3 hereof shall not be altered or extended.
10. (1) Any directions given by the Committee to the Trustees shall be sufficiently given if given by notice in writing under the hands of the Chairman, and the Secretary or other officer for the time being of the Club, or of any two officers of the Club.
(2) Any approval given or decision made by the Club for any of the purposes of this Deed shall be sufficiently given or made if given or made by a resolution passed by a majority of three fourths of the members voting thereon at a general meeting of the Club at which not less than 50 members are present and of which not less than two weeks notice specifying the intention to propose the resolution shall have been given in the manner in which notice of general meetings of the Club is usually given, and any approval or consent given by the Committee for any of the purposes of this Deed shall be sufficiently given, if passed by a majority of the members of the Committee voting thereon at a meeting of the Committee.

(3) A copy of a resolution of the Club in general meeting or of the Committee purporting to be certified as a true copy by the chairman of the meeting, at which such resolution was passed, shall for all purposes be sufficient evidence that such resolution was duly passed by the requisite majority at a meeting of the Club at which the requisite number of members was present or at a meeting of the Committee (as the case may be) duly convened for the purpose.

(4) A notice in writing signed by the Chairman or the Secretary or other officer for the time being of the Club certifying that the person named in the notice is the Chairman, Secretary or other officer of the Club shall for all purposes be sufficient evidence of the fact so certified, unless or until such notice is revoked or superseded by a similar notice so given.

(5) The receipt of the Treasurer for any sum payable by the Trustees under this Deed to the Club or to the Treasurer shall be a sufficient discharge to the Trustees for the sum so payable.

IN WITNESS whereof the said Cyril Winthrop Mackworth-Praed and Cedric Norman Walter have hereunto set their hands and seals and the Bank has caused its Common Seal to be hereunto affixed the day and year first above written.

SIGNED, SEALED AND DELIVERED by
the above named CYRIL WINTHROP
MACKWORTH-PRAED in the presence of:— } C. W. M. PRAED

S. D. Herington,
Alder House,
Aldersgate Street,
London, E.C.
Solicitor

SIGNED, SEALED AND DELIVERED by
the above named CEDRIC NORMAN
NORMAN WALTER in the presence of:— } C. N. WALTER
S. D. Herington

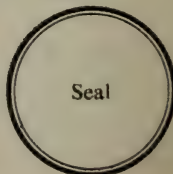
THE COMMON SEAL OF LLOYDS BANK
LIMITED was hereunto affixed in the presence
of:— }

Lloyd

Director

J. E. Way

Secretary



The Relationships of the Races of the Cape Bunting, *Fringillaria capensis* in the Rhodesias and Nyasaland

by MR. MICHAEL P. STUART IRWIN

Received 8th October, 1957

In the Rhodesias and Nyasaland, the Cape Bunting, *Fringillaria capensis*, forms three very distinctive races: *vincenti* Lowe 1932: of Nyasaland, northern Portuguese East Africa and the Petauke District of Northern Rhodesia; *plowesi* Vincent 1950: of Southern Rhodesia, ranging from the Matopos Hills north-eastwards to the Inyanga Highlands; and *smithersii* Plowes 1951: of the Chimanimani Mountains, southern Eastern Southern Rhodesia.

Throughout its range over this huge area, it is restricted to above 3,000ft., filling a localised ecological niche, consisting of rocky or boulder strewn wooded hills and in consequence unevenly and locally distributed being absent from large tracts of unsuitable country.

Left:-
F. c. vincenti
♂

Centre:-
F. c. plowesi
♂ Topotypical

Right:-
F. c. smithersii
♀ Type



The Central African Races of the Cape Bunting

Superficially the dark *vincenti*, from north of the Zambezi River may at first appear to show some approach to *smithersii* and indeed, in the original description of *smithersii*, the author at first compared it with that race. It would, however, now appear that the relationship is rather remote and that *vincenti* has its nearest relative in the pallid *plowesi*. Furthermore

plowesi in inhabiting the Inyanga Highlands and as far south at least as the Vumba and Umtali, occupies an area intervening geographically between the two darkest described races, and this fact has been contributory to the review of their relationships and origin.

The basis of the variation presented, points to two expansive phases representative of independant colonisations of the species from the south, but probably not contemporary with each other.

Plowesi, nearest geographically to *vincenti*, though at first appearing very different, is distinguished on the underparts by the predominantly grey colour with some pale buff on the abdomen, but with the grey pigment most strongly developed on the breast, and it is just the intensification of this one character and its extension throughout on the ventral surfaces, excepting the throat (which is dull white in both races), and the additional saturation of the mantle, loss of red tones and tendency to the overall obliteration of the dark feather centres, to give a more uniform, less streaked appearance than in any other race, that makes the distinctiveness of *vincenti*.

Measurably there is no significant difference between the two races:

vincenti

3 ♂♂	Wing	75, 75, 77 mm.	Tail	65, 67, 68 mm.
2 ♀♀		73, 75 mm.		63, 65 mm.

plowesi

10 ♂♂	Wing	75, 76, 76, 77, 77, 78, 78, 78, 79, 81 mm.
10 ♀♀		71, 73, 73, 75, 75, 76, 76, 76, 77, 79 mm.
10 ♂♂	Tail	63, 64, 65, 65, 65, 66, 66, 68, 69, 69 mm.
10 ♀♀		60, 60, 61, 61, 62, 62, 62, 64, 66, 66 mm.

Unfortunately *smithersii* is as yet only known from the Type and one other specimen, and though exhibiting wing measurements within the above range, has a significantly longer blackish tail.

smithersii

♀ (Type)	Wing	79 mm.	tail	72 mm.
?		73 mm.		74 mm.

In addition, from the *plowesi-vincenti* group, *smithersii* differs conspicuously in lacking any grey on the underparts, instead being a griseous olive or buff, including the throat (not buff grey as given in the original description), and consequently showing a closer approach to the races *limpopoensis* and *reidi* of the Transvaal and Natal, which are more rufescent on the abdomen, but have similar blackish tails with longer measurements as *smithersii*. The mantle of *smithersii* is rather distinct, with broad blackish feather centres, but this only represents the intensification of a character shared by the other races to the south.

At this stage it must be noted that the two most saturated races have developed independent and divergent specialisation in the colour pattern of the under tail coverts, further confirming different origins. In *vincenti* the feathers of the coverts are broad and rounded, grey at their bases, but rather broadly tipped with dull white, giving a noted barring effect. In contrast those of *smithersii* are narrow, more elongated, concolorous with the remainder of the ventral surfaces, but with long and very narrow blackish feather centres the pigment centred along the rachis. It must be stressed that none of the other described races show any such specialisations.

Phylogenically it would seem that *vincenti* arose from a northward range extension of the ancestral form that eventually gave way to *plowesi*, and that of the rather isolated *smithersii* from a similar northward thrust of some form rather like the present day *limpopoensis* and *reidi*. It would also seem probably, that these phases of colonisation were independent, taking place at different stages in the development of the species.

On the other hand, it is none too easy to ascertain the place of origin of the *plowesi-vincenti* group as a unit, as they are structurally and in colour unlike any of the other described races from the south. In the general greyiness of the underparts they most nearly approach the far distant *bradfieldi* of South-West Africa and of a still more pallid and as yet undescribed form from the coastal deserts of Angola, but unlike any of the other races, these western populations have very heavy bills, so that the greyiness of these distant races probably represents a case of convergence only and not a reflection of any close or actual relationship.

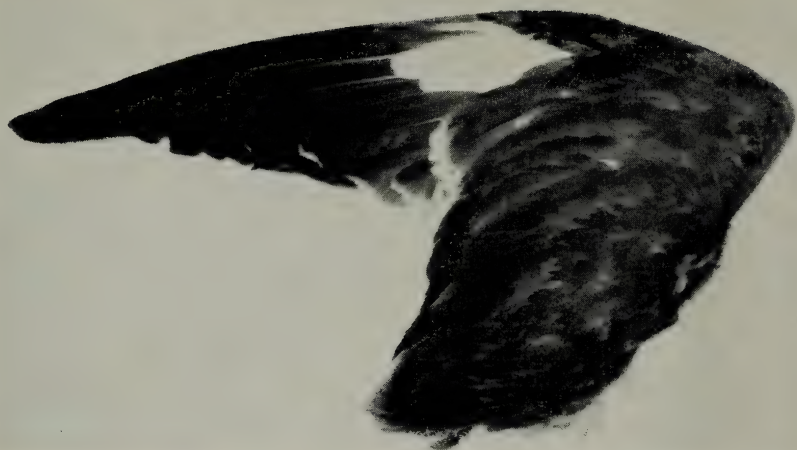
In the preparation of this paper I have examined all the described forms as reviewed by Vincent in *Bull.B.O.C.* 70.1950: pp. 14-17. I am indebted to the Authorities of the Transvaal Museum, Pretoria and to Mr. P. A. Clancey, Director of the Durban Museum and Art Gallery, for the loan of comparative material. Also to the assistance of Mr. R. H. N. Smithers, Director of the National Museums of Southern Rhodesia, Bulawayo, under whose care is the material upon which this study has been based.

On a rare colour aberration in certain species of the genus *Larus* Linnaeus

by MR. BRYAN L. SAGE

Received 19th November, 1957

In September 1951 Messrs. Carl L. Hubbs and A. Bartholomew jnr. published (*Condor* 53:221-227) a most interesting and detailed paper dealing with the persistence of a rare colour aberration in Heermann's Gull, *Larus heermanni* Cassin. The occurrence of this aberration in various populations of Heermann's Gull in America was first noted about 1862, and it has been reported intermittently ever since this date. This aberration generally takes the form of an oblong white patch on the upper surface of each wing near the carpal joint. One wing of a Heermann's Gull exhibiting this aberration is illustrated in Plate 1. I am indebted to Mr. Thomas R. Howell of the University of California for the loan of this specimen. In the majority of cases the affected feathers are the primary coverts, but very occasionally the patch may extend on to some of the secondaries, or even some primaries. Variations of the standard pattern occur on rare occasions, sometimes there are two distinct patches on each wing, or the patch is present on one wing and not the other. Various estimates have been made as to the frequency with which this aberration occurs in different colonies. In 1930 A. J. van Rossem estimated that it occurred 1-1000 in a colony at Isla Raza, California. Hubbs and Bartholomew, however, consider that generally speaking a frequency of 1-10,000 is probably a more accurate estimate. Twenty aberrant specimens were found among a total of 616 examined in nine American collections. Including field records the authors list 28 occurrences, in 21 cases where the sex was given 14



Wing of *Larus heermanni* ♂ collected at Isla Raza, Lower California, U.S.A., on 16th April, 1930, by A. J. van Rossem.

(66 $\frac{2}{3}$ %) were females and 7 (33 $\frac{1}{3}$ %) were males. The records are divided almost equally between adult and immature birds.

I am now able to record the occurrence of what is undoubtedly the same aberration in two species of gull in the British Isles:—

HERRING GULL

Larus argentatus argentatus Pontoppidan

On 24th June, 1957, whilst proceeding out to sea from Aberdeen on the S.S. "St. Clair", I noticed among the Herring Gulls following the boat, an adult with an oblong white patch on the primary coverts of each wing. The patch was perfectly symmetrical in size and shape on each wing, (figure 1).

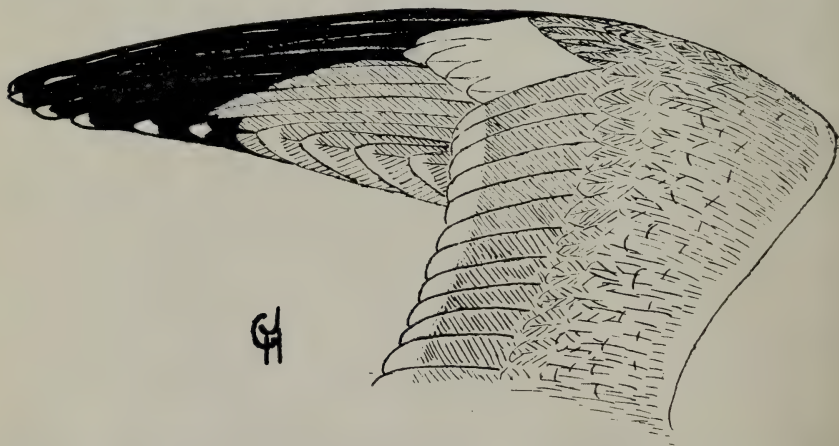


FIG 1. Wing of adult *Larus argentatus argentatus* seen at Aberdeen on 24th June, 1957.

LESSER BLACK-BACKED GULL

Larus fuscus graellsii Brehm.

The following records have been received from the correspondents whose names are quoted:—

- (1) Three adults in flight near Steep Holm in the Bristol Channel, on 3rd June, 1951, "had a white patch on the primary coverts of each wing." (W. L. Roseveare).
- (2) An adult "with a large white patch at the carpal joint of each wing" seen off Skokholm, Pembrokeshire, on 4th May, 1952. (W. L. Roseveare).
- (3) An adult seen in flight near Steep Holm on 30th May, 1954, had one large and one small white patch on each wing. (W. L. Roseveare).
- (4) An adult with a large white patch on the upper surface of each wing, seen on the Farne Islands, Northumberland, in early June 1955. (J. H. Bell).
- (5) One with a white patch at the carpal area of each wing seen at Glasgow, Lanark, on 21st April, 1956. (H. Monger-Gross).
- (6) An adult seen at Lundy Island, Devonshire on 23rd September, 1956 had a small white patch on each wing. (W. L. Roseveare).

At the time I made my own observation on the Herring Gull, and when I received the records relating to the Lesser Black-Backed Gull, I was not aware of the paper on Heermann's Gull. It was not until I came across this paper at a later date that the observations quoted above assumed any special significance. I have examined all the specimens of Herring and Lesser Black-Backed Gulls in the British Museum (Natural History) without finding any aberrant specimens of this type. I am indebted to Mr. R. W. Sims and other members of the Museum staff for their co-operation. The number of records of aberrant Lesser Black-Backed Gulls from the Bristol Channel indicates that the condition is persisting in a breeding colony or colonies somewhere in that area, quite probably on Steep Holm or Lundy Island.

The appearance of an identical aberration in both the Herring and Lesser Black-Backed Gull is hardly surprising considering the fact that they are, strictly speaking, races of the same species. It is, however, most remarkable that an aberration formerly known only from a gull whose breeding range is restricted to the Pacific Coast of North America and Mexico should be found to occur also in the British Isles. It is obviously impossible to regard this as a mere haphazard freak. The condition is plainly a genetical pattern remarkably stable in form, and it almost certainly represents a reversionary trend towards an evolutionary character of great antiquity. This suggestion was in fact put forward by Hubbs and Bartholomew who were not aware of the aberration occurring in any other species of gull. We can, perhaps, justly consider this as a case analogous with that of the "mottled" plumage and wing barring now known to occur quite frequently in various species of *Corvidae*, the significance of which has recently been discussed by Dr. James M. Harrison (*antea* 77:84-85 and 131-133). In both cases the condition is not sex linked; may appear in both adult and juvenile birds; is evidently carried by a recessive gene(s), and in colonial breeding species such as the Rook *Corvus frugilegus* Linnaeus and *Larus heermanni* often occurs with some frequency in widely separated breeding colonies.

Supplementary notes on the geographical distribution of the "Mottled" variety of the Rook

by MR. BRYAN L. SAGE

Received 20th December, 1957

In two previous papers on this subject (*antea* 76: 25-28 and 77: 42-43) it was shown that the "Mottled" variety of the Rook *Corvus frugilegus frugilegus* Linnaeus had been recorded from ten counties, namely, Cambridgeshire, Durham, Herefordshire, Hertfordshire, Kent, Lincolnshire, Northamptonshire, Northumberland, Somerset and Surrey. In the notes which follow evidence is produced showing that Cumberland can now be added to this list bringing the total to eleven. Additional information relating to the counties of Cambridgeshire and Northamptonshire is also given:—

A NEW COUNTY

CUMBERLAND.—the following passage appears on page 59 of *The Birds of Cumberland* (1886) by The Rev. H. A. Macpherson and William Duckworth — "A bird of the year, shot at Kirkandrews-on-Eden, in September, 1885, exhibits the interesting association of smoke-grey upper wing coverts, and primaries, secondaries, and rectrices barred terminally with smoke-grey, together with the usual colour of the species. This bird clearly belongs to the variety figured by Mr. Hancock (Cf. B. of N. & D., p. 38)." The bird figured by Hancock is, as was pointed out previously, a specimen of the "Mottled" variety.



FIG. 1. Map showing the vice-county distribution of the "Mottled" variety of the Rook

ADDITIONAL INFORMATION

CAMBRIDGESHIRE.—Mr. R. K. Cornwallis has very kindly drawn my attention to the following information given in a book by the Rev. Leonard Jenyns published in 1846 and entitled *Observations in Natural History with an introduction on Habits of Observing as connected with the study of that Science also a Calendar of Periodic Phenomena in Natural History; with remarks on the importance of such registers*. The author was Vicar of Swaffham Bulbeck and on page 150 he records, "In the spring of 1823 we picked up two young birds alive under the nests, just fledged, in which each feather was tipped with dirty white, giving the whole plumage a speckled appearance." It seems highly probable that these were specimens of the "Mottled" variety.

NORTHAMPTONSHIRE.—Miss A. M. Kendall informs me (*in litt.*) that in May, 1950 a young Rook barred all over was shot at Rushton by Capt. Roberts-George.

Figure 1 shows the distribution of this variety on the vice county system, and it strongly suggests that gene flow is responsible for the resultant pattern of distribution. It may well be that the "Mottled" variety will eventually be proved to have occurred in Yorkshire, thus connecting the East Anglian and Border pockets, and also in Warwickshire and Worcestershire which would then link up with East Anglia and Herefordshire. Should this be so the only really isolated localities left would be Somerset and Surrey-Kent south of the Thames.

A New Race of Brubru *Nilais afer* (Latham) from South-Eastern Africa

by MR. P. A. CLANCEY

Received 31st October, 1957

The populations of the small laniid *Nilais afer* (Latham) resident in Natal, Zululand, Swaziland and the extreme southern parts of Mozambique are now found to differ sufficiently from the wide-ranging *Nilais afer brubru* (Latham), as to warrant their nomenclatural segregation. The new race may be known as

Nilais afer solivagus, subsp. nov.

Type: ♂, adult. Lubuli Police Camp, near Nsoko, south-eastern Swaziland. 28th August, 1955. 300 ft. a.s.l. Durban Museum Expedition. In the collection of the Durban Museum.

Diagnosis: *Adult male*. Differs from *Nilais afer brubru* (Latham), 1801: Orange River, South Africa, in having the black of the upper-parts deeper and more coruscant, and the whitish dorsal streak yellowish tinged. On the under-parts creamy, less snowy white, and with the chestnut side-stripes conspicuously narrower and darker. *Adult female*. Very similar above to *N.a.brubru*, but dorsal streak distinctly yellowish tinged. On

under-parts markedly different owing to the reduced size of the side-stripes, which on the flanks are vestigial and only indicated by a light wash of yellowish cinnamon. Smaller in size. Wings of paratypical *N.a. solivagus* specimens—4 ♂♂ 80.5 – 84.5 (82.9), 2 ♀♀ 82, 83 mm., as against 4 ♂♂ 87 – 89 (87.9), 3 ♀♀ 83 – 88 (85.7) mm. in topotypical *N.a. brubru*.

Material: *N.a. solivagus* (paratypical), 6; *N.a. brubru* (topotypical 9, others 4), 13. Also material of *N.a. nigritemporalis* Reichenow and *N.a. massaicus* Neumann.

Measurements of the Type: Wing (flattened) 84, culmen from base 19, tarsus 22.5, tail 53 mm.

Range: Locally distributed in some thornveld districts of the high interior of Natal, and in Zululand, eastern Swaziland and the extreme southern parts of Mozambique.

Remarks: Topotypical material of *N.a. brubru* is extremely rare in collections, but through the efforts of the Durban and East London Museums a series of nine is now available from the Orange River and Kenhardt, in the north-western Cape Province. This latter locality represents an interesting extension of range to the south of the Orange River. *N.a. brubru* ranges from the north-western Cape and Orange River northwards to south-western Angola in the west and to the Zambesi River valley in the east, where it meets and intergrades with *N.a. nigritemporalis*. A single example of *N.a. solivagus* exhibiting in part the characters ascribed to *N.a. nigritemporalis* was obtained in 1933 by the late Dr. Austin Robert's party at Otobotini, in north-eastern Zululand. No other such example has since been obtained.

The Names of some Francolins

by MR. C. M. N. WHITE

Received 6th January, 1957

In "The Ibis":1952, p. 306 I proposed the fusion of *Pternistis* with *Francolinus*. I pointed out that this involved two possible changes of name but that there was doubt as to whether they represented valid races needing new names. In one case it now appears that a new name is needed. *Pternistis afer cunenensis* Roberts Ann Trvl.Mus.15. p. 22. 1932 is pre-occupied by *Scleroptila jugularis cunenensis* Roberts described in the same place on the same page, since both birds belong to the genus *Francolinus*. Hall and Macdonald have now shown that the "*Pternistis*" so described is valid, the data being given in Ann.Trvl.Mus.23.p. 7. 1957. I therefore propose *Francolinus afer palliditectus* nom.nov to replace *Pternistis afer cunenensis*.

BRITISH ORNITHOLOGISTS' CLUB

REPORT OF THE COMMITTEE

MEETINGS

The Club held nine meetings during the year including a joint meeting in March with the British Ornithologists' Union. Attendances totalled 406 compared with 428 in the previous year.

MEMBERSHIP

The Committee very much regret to record the deaths during 1957 of Mr. J. Bartholomew, Sir Norman B. Kinnear and Mr. J. van Tyne. Since the end of the year, we are sorry to record that Capt. C. H. B. Grant has died.

There were eight resignations and three members were removed from the list for non-payment of subscriptions and, with an additional 41 new members, the total membership at the end of the year reached the record figure of 243.

THE BULLETIN

The Editor is to be congratulated on the prompt publication of the "Bulletin" on the first of the month and an increase in outside subscriptions from 80 to 96. The "Bulletin" was maintained at the same level of 160 pages as in the previous year.

FINANCE

The Accounts of the Club for the year 1957 presented herewith show an excess of Expenditure over Income to the amount of £16 4s. 4d. In the previous year there was an excess of Expenditure of £34 10s. 4d., which included non-recurring expenditure in connection with the "Bulletin."

In the year 1957 there has been a general increase in Miscellaneous Expenses and also in postage. On the other hand, there were gains in income of £39 for Entrance Fees and Subscriptions of new members, and £25 for Investment Income. Against this the Club has suffered a material loss through the withholding of its claim for repayment of Income Tax on the Deeds of Covenant. The Club is not alone in this respect, all similar bodies being affected in the same way, following a decision in the Courts. It is very doubtful whether these claims will be ultimately admitted.

It is pleasant to record the receipt, from four members, of unsolicited donations to the "Bulletin Fund", amounting to £18 11s. 0d., and the thanks of the Club is expressed to them.

If the refund of Income Tax on the Deeds of Covenant continues to be denied to the Club for the year 1958, it is estimated there will be a deficit of about £45 on the year and the "Bulletin Fund" will be called upon to make this good. A contribution to the "Bulletin Fund" is, therefore, a

BRITISH ORNITH

INCOME AND EXPENDITURE ACCOUNT

1956 £	EXPENDITURE	£ s. d.	£ s. d.
	"Bulletin" Vol. 77		
	Cost of publication, distribution, including Editor's		
371	Expenses	389	17 10
75	Less Sales	90	12 7
296		299	5 3
31	Special Expenditure re "Bulletin"		
42	Notices, etc. for Meetings	46	19 6
36	Postages, Projectionist and Miscellaneous Expenditure	56	16 3
5	Audit Fee	5	5 0
5	Contribution "Zoological Record"	5	5 0

£415		£413 11 0
34	Excess of Expenditure over Income, brought down ...	16 4 4
—	Surplus for the year carried to General Fund ...	27 5 1
£34		£43 9 5

BALANCE SHEET

£		£ s. d.	£ s. d.
	GENERAL FUND:		
1241	As at 31st December, 1956	1240	12 3
	Add: Surplus for the year	27	5 1
		1267	17 4
	BARRINGTON FUND:		
1000	Legacy from F. J. F. Barrington, dec'd.	1000	0 0
	BULLETIN FUND:		
78	As at 31st December, 1956	77	18 3
	Received during year	18	11 0
		96	9 3
	SUBSCRIPTIONS 1958 paid in advance		
	Members	18	13 0
67	Subscribers	51	11 7
		70	4 7
22	SUNDRY CREDITORS	22	5 0

C. W. MACKWORTH-PRAED, *Chairman*
C. N. WALTER, *Hon. Treasurer*

£2408	£2456 16 2
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We have examined the above Balance Sheet and Income and Expenditure Account therewith, and in our opinion correct.

FINSBURY CIRCUS HOUSE,
BLOMFIELD STREET, LONDON, E.C.2.
24th February, 1958

LOGISTS' CLUB

R THE YEAR ENDED 31st DECEMBER, 1957

1956 £	INCOME	£	s.	d.	£	s.	d.
	SUBSCRIPTIONS:						
215	232 Members	243	12	0			
12	9 Associates	9	9	0			
47	Income Tax recovered under Deed of Covenant	—			253	1	0
274							
	ENTRANCE FEES:						
26	41 Members	41	0	0			
2	— Associates	—			41	0	0
1	Donations						
78	INVESTMENT INCOME:						
	General Fund	54	6	0			
	Barrington Fund	48	19	8	103	5	8
381					397	6	8
34	Balance, Excess of Expenditure over Income, carried down				16	4	4
£415					£413	11	0
19	Sales of "Bulletin" for previous years <i>less</i> expenses	43	9	5			
15	Deficit for the year transferred to General Fund	—					
£34					£43	9	5

31st DECEMBER, 1957

£		£	s.	d.	£	s.	d.
	INVESTMENTS at Cost						
	General Fund:						
	£1,000 4½% Defence Bonds	1000	0	0			
	£100 3% Savings Bonds 1960/70	100	0	0			
		1100	0	0			
	<i>Less: Reserve</i>	20	0	0	1080	0	0
1080	(Market Value £1,075)						
	BARRINGTON FUND:						
1000	£1,399 11s. Od. 3½% War Stock	1000	0	0			
	(Market Value £871)						
1	PROJECTOR, LANTERN & SCREEN - Nominal Value	1	0	0			
1	STOCK OF "BULLETIN" - Nominal Value	1	0	0			
1	DEBTORS						
325	CASH AT BANK	374	16	2			
£2408					£2456	16	2

with the books and records of the Club and certify them to be in accordance

W. B. KEEN & Co.,
Chartered Accountants

way in which members can help to maintain the "Bulletin" in its present form.

On 18th February, 1958 the Deed relating to the new Trust Fund was duly approved and the Barrington Fund was then transferred to the Trustees.

C. W. MACKWORTH-PRAED,

Chairman.

PURCHASED
- 1 APR 1958

Notes on African Larks, Part vi

by MR. C. M. N. WHITE

Received 6th January, 1958

The present notes are largely supplementary to those which have already appeared in "The Bulletin" in this series.

Mirafrja javanica (l.c.1956. p. 3). I listed *M.j.schillingsi* Rchw. as a race of this species; further material convinces me that it is not separable from *marginata* Hawker.

Mirafrja poecilosterna (Rchw.) and *M.gilletti* Sharpe. I suggested (l.c.1956. pp. 2-3) that these two species were very closely allied and might replace each other geographically. In fact they clearly exist together in Italian Somaliland, and through the kindness of Dr. Moltoni I recently examined at Milan a specimen of *M.poecilosterna* collected in northern Italian Somalia, east of the border of British Somaliland. Mr. J. G. Williams also assures me that they differ considerably in habits, *gilletti* when disturbed running into the shelter of low growing bush. Despite their close structural and other resemblances, they must be regarded as quite distinct species.

Mirafrja apiata (Vieillot). I referred (l.c.1956. p. 54) to a specimen of *M.a.kalaharica* (Roberts) from Dautsa in Ngamiland. Comparison with series of *kalaharica* and *nata* Smithers makes it clear that this Dautsa bird is not *kalaharica*, and agrees in every way with *damarensis* Sharpe. It differs from *nata* exactly as described for *damarensis*. This is a new extension of the range of *M.a.damarensis*.

Mirafrja africana Smith. I discussed (l.c.1956. p. 121) the difficulty of dealing taxonomically with the populations from Zululand and Portuguese East Africa to Southern Rhodesia and the southern central part of Northern Rhodesia. Since then Mrs. Hall ("Ostrich": 1956. p. 102) has suggested recognising a greyer race as *zuluensis* and a warmer, browner or redder race as *transvaalensis*. Since then too I have been able to examine a good series of birds from Monze and Lusaka in Northern Rhodesia. There is undoubtedly a cline running from the greyer birds of the eastern area to the warmest birds in Northern Rhodesia and the two extremes contrast well although much of the Southern Rhodesia population is intermediate and difficult to place. On the whole I think Mrs. Hall's solution of two races as proposed by her is the best approach.

Calandrella obbiensis Witherby. This lark has hitherto been known only from the type. It seems worthwhile to record that in 1956 whilst at Milan Dr. Moltoni showed me two unidentified larks collected near Mogadishu which are referable to this species.

Notices

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1958

15th April, 20th May, 16th September, 21st October, 18th November, 16th December.

FREE COPIES

Contributors who desire free copies of the Bulletin containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

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OF THE

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PURCHASED
- 5 MAY 1958



Edited by
DR. JEFFERY HARRISON

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BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

Volume 78**Number 5***Published: 1st May, 1958*

PURCHASED
- 5 MAY 1958



Annual General Meeting

Chairman: MR. C. W. MACKWORTH-PRAED

The Sixty-sixth Annual General Meeting of the Club was held at 5.45 p.m. on Tuesday, 15th April, 1958 at the Rembrandt Hotel, Thurloe Place, London, S.W.7.

The Minutes of the last Annual General Meeting held on 16th April, 1957, and the Report and Accounts for the year to 31st December, 1957, were passed unanimously.

The Chairman moved a vote of thanks to the Auditors, Messrs. W. B. Keen & Co.

ELECTION OF OFFICERS

Committee: Mr. I. J. Ferguson-Lees.

Hon. Treasurer: Mr. C. N. Walter (re-elected).

Hon. Secretary: Mr. N. J. P. Wadley (re-elected).

COMMITTEE 1958

Mr. C. W. Mackworth-Praed, Chairman (1956), Captain C. R. S. Pitman, Vice-Chairman (1956), Mr. C. N. Walter, Hon. Treasurer (1950), Mr. N. J. P. Wadley, Hon. Secretary (1950), Dr. J. G. Harrison, Editor (1952), Mrs. B. P. Hall (1955), Miss T. Clay (1956), Mr. J. G. Mavrogordato (1957), Mr. I. J. Ferguson-Lees (1958).

The Annual General Meeting was followed by the monthly meeting.

Chairman: Mr. C. W. MACKWORTH-PRAED

Members present, 30 ; guests, 6; total, 36.

Important Notice — Meeting Cards

As an economy measure beginning with this issue, the meeting card to be returned to the Secretary will be enclosed in the same envelope as the Bulletin.

The Birds of the Solomon Islands

Mr. I. C. T. Galbraith gave at short notice a most comprehensive talk on this subject, illustrated with specimens. Their greatest affinity is to the Bismark Archipelago, but with a higher proportion of endemic birds. Discontinuous distribution is marked and is dependent upon habitat, the Button Quail for instance being only found on Guadalcanar, the only island

with extensive grass, and the Mountain Whistler only on Bougainville and Guadalcanar, where there are mountains.

Geographical variation is intense and appears to provide a powerful barrier to the spread of certain species. Ecological competition excludes other species from some islands. Most of the discontinuities are basically geographical, but are emphasized by subsequent selection. The *Aplonis* Starlings provide a good illustration of speciation in the act of taking place.

Snake and Lizard Predators of Birds

by CAPTAIN CHARLES R. S. PITMAN

Received 8th November, 1957

These notes are almost entirely concerned with Africa.

Part I.

SNAKES

It is convenient to group the snake predators as: (i) arboreal, (ii) mambas, (iii) cobras, (iv) ringhals, (v) vipers, (vi) egg-eater, (vii) constrictors and (viii) others. Birds seem to be able to recognize which species of snakes are dangerous to themselves from the way in which they will mob some, yet others which are very conspicuous are left unmolested even when in the vicinity of a nest or nesting colonies.

(i) Arboreal

It is understandable that tree snakes will to a greater or lesser degree prey on birds and the principal predators are (a) *Dispholidus typus*, better known as the boomslang (Afrikaans for tree snake); (b) *Thrasops*; (c) *Boiga blandingii*; and (d) *Thelotornis kirtlandii*, more popularly called vine snake, twig snake or bird snake. An arboreal cobra, and the mambas — some of which are mainly arboreal, are dealt with later. With arboreal species there is unlikely to be any special bird preference, except for size; it is just a matter of opportunity.

(a) *Dispholidus typus*. Mr. C. J. P. Ionides (*in litt.*) in Tanganyika has twice found birds in boomslang stomachs, once it was a fledgling Fork-tailed Drongo, *Dicrurus adsimilis*, another time a fledgling yellow weaver, *Ploceus sp.*

Cansdale ⁽¹⁾ p. 35, Pitman ⁽²⁾ p. 178, Corkill ⁽³⁾ p. 22, Rose ⁽¹⁷⁾ p. 273 and ⁽¹⁸⁾ p. 45 and p. 105, all say its diet includes birds; in addition Cansdale ⁽¹⁾ p. 35 and Rose ⁽¹⁸⁾ p. 105, birds' eggs. Mr. R. I. G. Attwell (Biologist, Northern Rhodesia) *in litt.*, at Mossel Bay, South Africa, found a boomslang preying on a Cape Weaver Bird, *Ploceus capensis*.

Mr. C. J. Skead (Director, Kaffrarian Museum, King Williams Town, South Africa) *in litt.* "I have taken the nestlings of *Ploceus capensis olivaceus* from the stomach of a boomslang, *Dispholidus typus* just after the snake had robbed the nest."

Dr. V. Fitz Simons (Director, Transvaal Museum) "personal observations" (*in litt.*) "*Dispholidus typus* seen preying on eggs and young of *Passer m.melanurus*, *Symplectes b.bicolor*, *Sitagra intermedius cabanisi*, *Hyphantornis c.capensis*, *Hyphantornis spilonotus* and *Hyphantornis v. velatus*"; this nomenclature is according to Austin Roberts ⁽¹⁶⁾.

Mr. Hugh Roberts (Transvaal) writes that he once found an unidentified bird chick in a boomslang.

Father K. Tasman ⁽⁴⁾ says birds are included in its food.

A. Loveridge ⁽⁵⁾ records a boomslang robbing the nest of a Bronze Mannikin, *Spermestes cucullatus* and swallowing the eggs (see also under Egg-eater, *Dasypeltis scabra*).

Loveridge ⁽⁶⁾ also found a bird's feathers in the stomach of a specimen collected at Mt. Mbololo, Kenya.

Dr. V. G. L. van Someren ⁽⁸⁾ described how "I once watched a green tree-snake trying to get at the young in a spectacled weaver's nest (*Hyphanturgus ocularius suahelicus*). The brute negotiated the slender, pendant branch and reached the nest, but could not manage the 12-inch tubular entrance and fell into the pond below the nest . . . a week later it did take two newly hatched *Zosterops* from a nest on the opposite side of the pond." The green tree-snake may have been *Dispholidus typus*; it would have been exceptionally clever if it had managed to enter the weaver's nest protected as it was by the long, rather narrow, tubular entrance.

Mr. R. E. Symons, writing from Natal, states that the boomslang definitely preys on birds, usually bulbuls and flycatchers, and that these birds have often led him to a predatory snake.

Mr. J. M. Stubbs (*in litt.*): "A friend of mine in South Africa saw a boomslang go to a nest (believed to be that of *Zosterops*). He afterwards killed the snake and found one newly hatched bird in its mouth and one in its stomach."

Mr. T. R. H. Owen, in the Sudan, has seen the boomslang preying on the eggs and young in weaver colonies.

Tasman (*in litt.*) in Southern Rhodesia has found a meal in 17 boomslang stomachs, but only two of them contained the remains of birds. Of these two, one had five small nestlings, recently swallowed, and the other a small bird's feathers.

Mr. L. D. E. F. Vesey-FitzGerald, in the Lake Rukwa region of Tanganyika Territory, found a fledgling sunbird in a boomslang stomach.

Mr. W. Colley, writing from Tanganyika, records the remains of a fledgling bulbul and other feathers in the stomach of *Dispholidus typus*, 1,200 mm. in length."

(b) *Thrasops*. Snakes of this genus may attain a length of 7½ feet. Solid-toothed and harmless, those which are black in colour are in the field indistinguishable from the black variety of the boomslang (*Dispholidus typus*) which is of similar habits but back-fanged and venomous.

Cansdale ⁽¹⁾ p. 29, says the black tree snake feeds mostly on birds. Specimens examined by Pitman ⁽²⁾ p. 108, have had the remains of small birds in the stomachs.

Loveridge ⁽⁷⁾ p. 13, has found a bird in a stomach he examined: same record in ⁽⁶⁾ p. 250 and ⁽¹²⁾ p. 136.

Villiers ⁽⁹⁾ p. 83, says it feeds partly on birds.

(c) *Boiga blandingii*. A large, repulsive-looking, back-fanged venomous species which may attain a length in excess of 8 feet. Cansdale ⁽¹⁾ p. 31: "three were shot in a palm-tree at Makeni, removing the young from weaver-birds' nests" and "As might be expected, the tree snake feeds mostly on birds, especially birds of weaver size."

Pitman ⁽²⁾ p. 137: "All specimens examined which contained food had been feeding on weaver finches the size of sparrows."

Mr. T. S. Jones (Department of Agriculture, Sierra Leone) writes: "the only cases I have personally come across of snakes preying on birds are in connection with *Boiga blandingii* . . . I shot three of these snakes amongst village weaver birds' nests . . . The snakes were pushing their heads into one nest after the other and taking the young ones, numbers of which were found in each . . . a snake almost certainly of this species was seen emerging from under the eaves of an office roof and delving into nests of the Little African Swift (*Collocalia affinis abessynicus*) which were there, presumably after young ones."

(d) *Thelotornis kirtlandii*. Bird Snake, Twig Snake or Vine Snake. It has not been possible to trace the origin of the "popular" name "Bird Snake", and certain authorities are of the opinion it is a misnomer claiming that this snake is principally a lizard-eater. This may be the case in some localities, but in parts of Uganda it is certainly mainly a bird-eater.

According to Cansdale ⁽¹⁾ p. 35, referring to West Africa: "Although sometimes called the bird snake, it feeds principally on lizards and other snakes."

Pitman ⁽²⁾ p. 171, says: "when the snake is concealed in the branches of a tree awaiting its prey, it periodically flickers its tongue so as to resemble a brightly coloured insect, and it is then able to seize any birds or lizards which approach to investigate." The brilliantly coloured tongue is of a vivid orange, vermilion or scarlet hue, forked and black-tipped.

Villiers ⁽⁹⁾ p. 103, records that birds are included in its diet.

Loveridge ⁽¹²⁾ p. 152: "Actually birds seem less frequently an article of diet than arboreal lizards or snakes"; and on p. 153 "a Buta specimen was found to have swallowed a skink and two large nestlings of a weaver (*Spermophaga*)". These references are to typical *Thelotornis kirtlandii*; also p. 157, *Thelotornis kirtlandii capensis*: "Only one snake of many examined, held feathers, apparently those of a weaver or finch."

Loveridge ⁽¹³⁾ p. 280: out of 39 *Thelotornis kirtlandii capensis* examined "Only one vine-snake held the remains of a bird, and as my previous records also indicate that cold-blooded creatures constitute the principal prey of this species, I think it would be advisable to abandon the alternative name of 'Bird Snake'"; also, ⁽¹⁴⁾ p. 12: "Their principal food is lizards and often small birds when these hop within striking distance of the apparently inanimate vine branch with a curious flickering scarlet tongue."

Rose ⁽¹⁷⁾ p. 284, describes how *Thelotornis*, the Bird Snake behaves when approaching a bird to within striking distance, and how it can swallow its prey upwards, with its head hanging downwards.

Mr. Michael Barrett has informed me that on his estate in the Toro district of western Uganda he has more than once found Mannikins, *Spermestes cucullatus* in *Thelotornis* stomachs, and once a ♀ Beautiful Sunbird, *Nectarinia pulchella*. In 1955 he records: "Bulbul (*Pycnonotus tricolor*) fledglings were attacked by a *Thelotornis* in the nest, but one escaped . . . Shot a *Thelotornis* with an unidentifiable small bird in the stomach. Another Twig Snake (empty) was also shot on this day . . . *Thelotornis* with a partly digested though unrecognizable small bird in

stomach . . . (In the same year he) found a Twig Snake attacking a White-Eye's (*Zosterops*) nest containing two fledglings which it devoured." Out of four *Thelotornis* which he shot in 1956 two had empty stomachs, the other two were not examined. He writes: "I was amazed at the effrontery displayed by some birds to *Thelotornis*, particularly sunbirds. I have seen one actually land on a snake's lower back for a short while."

Mr. William Barrett, of the same address in Toro writes: "I shot a small bird-eating snake (*Thelotornis*) actually in the act of attacking a bulbul's (*Pycnonotus tricolor*) nest. The snake fell a few feet with the fledgling still fluttering in its mouth."

Isenmenger ⁽²⁶⁾ p. 49, watched a bird snake lying in the centre of a thorn bush being mobbed by an excited flock of birds. One small bird alighted on a twig a few inches from the snake's head and was immediately seized.

(ii) Mambas

All mambas are arboreal, the Green Mamba and the Forest (Green) Mambas more so than the Black Mamba. All are to a considerable extent bird eaters.

Vide his note under *Dispholidus typus*, R. E. Symons (*in litt.*) has sent me similar information in connection with the black mamba and the green mamba.

Mr. John Blower of the Tanganyika and Uganda Game Departments (*in litt.*) has seen mambas (presumably both the black and the green) obviously hunting birds in the branches of trees, though never actually seeing one make a kill.

(a) *Dendroaspis polylepis*, Black Mamba. Although it is generally known that this snake eats birds, there is little in the published literature; but Rose ⁽¹⁷⁾ p. 233-4 and ⁽¹⁸⁾ p. 45 says it subsists mainly on birds, and ⁽¹⁷⁾ p. 297 and ⁽¹⁸⁾ p. 146 that it also feeds on eggs.

Mr. A. M. T. Henley (*in litt.*) in East Africa has twice observed what he took to be a mamba amongst a large colony of the weaver *Ploceus spekei*, presumably after the nestlings.

Isenmenger ⁽²⁶⁾ p. 48, describes how he watched three black mambas feeding on small sugar-birds which were attracted to creeper blossom. Occasionally one of them would be snapped up. The mamba would hang on to the fluttering bird until the poison took effect.

Dendroaspis angusticeps, Green Mamba. Well-known as a bird-eater, which will raid weaver colonies, though published records are conspicuous by their absence. Visitors to the Kruger National Park in South Africa have told me that they have seen green mambas raiding weaver colonies for nestlings, but it is possible that the snakes were boomslangs.

Loveridge ⁽⁶⁾ pp. 1275-6, refers to a 5½ foot mamba on Manda Island, Kenya, which had swallowed nestlings of *Turdus tephronotus*; and a 6-foot specimen, from the same locality which had nestling birds in its stomach: also see ⁽²²⁾ pp. 173-4.

Again, ⁽¹⁴⁾ p. 17, he refers to the shyness of mambas when feeding: "I have surprised one with a dead weaver bird which it was swallowing and it dropped the bird at once to menace the onlooker." When our bird's nesting in 1917 he came upon "a dead Bishop Bird sitting upon three eggs containing young which I believe were alive. The bird was so fresh

that I was able to skin it twelve hours after finding. The next day not twenty feet from this place I found a Green Mamba lying on the bushes. In all probability it had struck at the weaver which had just sufficient vigour to flutter to its nest and there die."

At Taveta (Kenya) Meinertzhagen saw a green mamba take a barbet in a tree, and being "mobbed" by a turaco. The snake could do nothing about this as its mouth was full, and the turaco actually pecked the snake.

Isemonger, ⁽²⁶⁾ p. 52, describes how a green mamba raiding a hammerkop's (*Scopus umbretta*) nest containing week-old chicks, was driven off by the parents.

Dendroaspis jamesonii and *Dendroaspis viridis*, Forest (Green) Mambas. These inconspicuous snakes, which often exceed a length of 7 feet and sometimes larger, are amongst those species which birds recognize as an enemy, and the writer has often been led to one of them in the forest gloom in Uganda by the noisy chattering of the birds which were mobbing it. A number of stomachs have been examined with negative results, all were empty.

⁽²⁾ p. 234, describes how when collecting in a dark Uganda forest a Jameson's mamba was found gliding towards a Black-and-White Flycatcher (*Platysteira*) which had been shot.

According to Cansdale ⁽¹⁾ p. 44: "Mambas would be expected to feed mostly on birds, but they will also take small mammals."

Mr. R. R. Glanville (Sierra Leone) writes: "On several occasions I have seen the Green Mamba, *Dendroaspis viridis* preying on colonies of the village weaver, *Plesiositagra c.cucullata* and local information was that this snake, as well as the Black Cobra, *Naja melanoleuca*, takes many species of birds freely."

Stones ⁽¹⁵⁾ p. 153: "their normal diet consists of birds and small mammals."
[To be continued]

The occurrence of the Black Stork *Ciconia nigra* (Linnaeus) as a palaearctic migrant in Nyasaland

by MR. C. W. BENSON

Received 12th February, 1958

Benson, "A Check List of the Birds of Nyasaland." 1953, cites two records of Black Storks ringed in Germany and Hungary, recovered in Nyasaland. He had already given details in Bull. Mus. Comp. Zool. 106(2), 1951, p. 73. Due to errors for which he is not responsible, it has now been ascertained that both these records probably relate to the White Stork *C. ciconia* (Linnaeus). Dr. G. Zink, of the Vogelwarte Radolfzell, has informed me that ring No. B 16052, inserted on a nestling in East Prussia on 20th July, 1927, and recovered at Lake Chilwa the following October, definitely refers to the latter species. As a result I made enquiries through Dr. Zink about ring DAP Hungaria No. 7509, recovered at Fort Hill in March, 1925. Dr. A. Keve, of the Ornithological Institute, Budapest, has reported that the record cannot be substantiated, because all the relevant documents were destroyed by fire in 1945. But he also states that ring No. 7516 refers to a White Stork ringed by a Dr. Schenk in 1923, and that no Black Storks were ringed in Hungary at that time. I consider that this

record must also be rejected. I have been given the following references to recoveries of Black Storks in Africa, though have been unable to consult them:—Schüz, Vogelzug 11, 1940, pp. 23 – 31 and 108; Szczepski and Szczepka, Acta. Orn. (Warszawa) 5, 1956, pp. 77 – 112.

***Turdus merula agnetae* Volsoe**

by PROFESSOR G. NIETHAMMER

Received 18th January, 1958

Volsoe recently described the Blackbird of the Canary Isle of Palma as *Turdus merula agnetae* on the following characters:—the female above and below is much darker and the male much deeper black than *T.m. cabrerae*, the race inhabiting the rest of the Canaries (Dansk Orn. Foren. Tidsskr. 43, p. 82, 1949). He presumed that the westerly island of Hierro would also support this dark form of Blackbird. Vaurie however does not accept *T.m. agnetae*, because the meagre material which Volsoe had (only three females), he regarded as individual variants, and also because of the three females which he saw from Palma and Hierro, only one was as dark as *T.m. agnetae* (Amer. Mus. Nov. Nr. 1733, 1955, p. 2). Since Vaurie's material also appeared insufficient to prove decisive, I went into the whole matter again with the ample series of Canary Island Blackbirds from the Thanner collection in the Alexander Koenig Museum, Bonn, together with Volsoe's description based on the three females from Palma, which were kindly sent me by Professor Johansen of the Copenhagen Museum.

It was next necessary to examine Volsoe's surmise concerning the Blackbirds of the island of Hierro: four females in our collection from Hierro are equally as dark as the three females from Palma collected by Volsoe. These seven females form a uniform series which is quite distinct from four females collected from Gomera and five females from Gran Canaria. A tenth female however, also from Gran Canaria is as dark as *T.m. agnetae* and does not conform to the series of *T.m. cabrerae*.

In males, the tendency is to all intents and purposes the same; birds from the western islands of Palma and Hierro are more intensely black than birds from the eastern Canaries. I have had before me the following males:—Palma 1; Hierro 5; against Gomera 5; Teneriffe 4 and Gran Canaria 7. In the males the differences are by no means so pronounced as in the females.

On these morphological facts, already established by Volsoe, and on consideration of the ecological factor that precipitation increases from east to west, I uphold the validity of Volsoe's race, *T.m. agnetae* and do not agree with placing it in the synonymy of *T.m. cabrerae*.

I am most grateful to Dr. James M. Harrison for translating this paper into English for me.

On a Rare Colour Aberration in the Greater Black-backed Gull

by MR. DAVID JONES

Received 20th December, 1957

Mr. Bryan Sage has recently recorded in the *Bulletin* an unusual variant in Heermann's Gull, the Lesser Black-backed and the Herring Gull in which the primary coverts are white.

On 13th August, 1956, I recorded in my diary that I had seen in the harbour of Concarneau, Brittany, France an adult Greater Black-backed Gull, *Larus marinus* Linnaeus, with a very prominent white patch in each wing. These were "oblong" about $2\frac{1}{2}$ in. x $1\frac{1}{2}$ in. and were situated in the centre of the primary coverts. There was also a second immature Greater Black-backed Gull with similar but far less pronounced patches.

References:

Sage, B. L., "On a rare colour aberration in certain species of the genus *Larus* Linnaeus" Bull.B.O.C.Vol.78, pp. 71-3, 1958.

Further Population Studies of the Jackdaw

by DR. ANDREW KEVE

Received 15th October, 1956, but held over until normal communication was restored with Hungary.

The taxonomic problems of the Jackdaw, *Corvus monedula*, have given rise to recent researches by Voous (1950) and Vaurie (1954). In 1938 and 1942 I published my findings, based on 829 skins and I have since seen many more. After some years' study, my results agreed with those of Stegmann (1932), Mayaud (1933), Portenko (1954) and Rustanow (1954), namely that the European Jackdaw is virtually monotypic. I even went further in that I considered that all the Jackdaws of Europe, west Siberia and North Africa belonged to the nominate race *C.m.monedula* Linnaeus.

My opinion has now changed, when Dr. H. Kummerloewe kindly sent me the series from the Dresden Museum. These typical central European birds showed me that the surest character for differentiating the different races is not on the neck, as was previously supposed, but on the breast. Basing my further research on this, I have arrived at the conclusions set out in this paper. The question of the evolution of the Jackdaw is fully discussed by Voous (1950), so I need only add some remarks concerning the systematic problems involved.

I should like to state that in my opinion the racial differences do not depend on colour, but in the quality, i.e. the length and thickness of the feathers. On this hypothesis the differences between the races are determined not by pigmentation, but by differences of colouration caused by the different degrees of abrasion of the plumage. The northern races have longer and stronger plumage, so that it is never so worn as the southern races, which have a weaker and shorter plumage. These same differences exist also in lowland and high mountain populations. Northern and high mountain populations are always of a darker colouration, associated with the well-developed white collar on the lower part of the neck. This collar is not identical with the grey nape, and unfortunately in the literature, both are often enough not clearly distinguished. The nape becomes lighter by wear in the Mediterranean populations and is silvery-grey, the white collar merging with it.

Great difficulty is brought about by the movements of Jackdaws. Ringing has proved that the northern and eastern populations are regular migrants. Russian ringed Jackdaws have even been found in Hungary, while the British and central European populations only indulge in local movements. Large numbers of eastern Jackdaws invade the whole of Europe in winter and the flocks consist of different races. The Jackdaw is

a very social bird and it is highly probable that some individuals of different races remain in our colonies and breed, while other individuals of the southern and western populations leave with the eastern flocks to breed with them. This secondary intergradation is responsible for many difficulties in the taxonomy of the species, which is also complicated by great individual variation in the moult.

Vaurie (1954) could not have seen my original paper, but only a preliminary summary, so his opinion differs from that of Voous and myself. Our results agree completely, except over the central European population. This is easy to understand when we investigate the Netherlands population, which is one of the most difficult populations to determine, since the racial characters are much diluted. If the investigations are based on the population of Saxony (*terra typica*), it becomes clear that the differences between the west European population *C.m.spermologus* Vieillot and the central European *C.m.turrium* Brehm are much more marked than they are between *C.m.monedula* and *C.m.spermologus*. In 1947 I had the opportunity to examine the series in the Royal Scottish Museum, Edinburgh, and although the time was too short for a thorough study and the material insufficient, I believe that the Scottish population presents greater problems than that of the Netherlands.

Concerning the difference of the Jackdaw of the Balkans, *C.m.collaris* Drummond and the eastern Jackdaw, *C.m.soemmeringi* Fischer, there are papers which deal specifically with the Balkan Jackdaw, Niethammer (1943) accepted my opinion concerning the race from the Peleponnes, but he is very cautious; it is accepted for Bulgaria by von Jordans (1940) and Pateff (1950) and for Macedonia by Matvejew (1955). Makatsch and Mastrovic have not studied this question fully.

C.m.ultracollaris Kleinschmidt is in my opinion an ill-defined race and is probably *C.m.pontocaspicus* mihi. The latter is a transitional form with a wide distribution, and was confirmed by Niethammer (1944) in his study on the birds of Crete.

In the light of these considerations and following the excellent population studies by Kleinschmidt, I feel that the Jackdaw provides a very interesting study in evolution. In the case of the Yellow Wagtail, *Motacilla flava*, I believe that its races are still in the process of evolution (Keve, 1958), whereas in the Jackdaw one may well ask whether it is not a form, which in this process has changed but little and its races have achieved uniformity. Naturally there are many ecological factors which make this process likely. In the eastern *dauricus* group the process is reaching finality and in this respect it is significant that *C.m.khamensis* is not accepted as valid by most workers: I regard it as a very weak race. This eastern group is probably the most ancient in the evolutionary history of the species, of which the *monedula* group is the most recent. The process can be interrupted by new mutations, but a number of opinions indicate that the trend is for the species to become monotypic.

I would express my thanks to Dr. James M. Harrison for his assistance over this paper.

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Notes from Northern Rhodesia

by MR. C. W. BENSON

Received 12th February, 1958

The following notes are supplementary to Benson and White's "Check List of the Birds of Northern Rhodesia", 1957. All specimens mentioned are in the National Museum of Southern Rhodesia, Bulawayo, and I must thank Mr. R. H. N. Smithers and Miss Mary Paterson for several loans of material. I am also grateful to my colleague Major I. R. Grimwood for examining most of the specimens with me.

(a). The juvenile plumage of the barbet *Lybius minor macclouniei* (Shelley).

On 17th December, in fringing forest along the Kafue River at 14°23'S., 27°04'E., I collected three specimens of this barbet together in a family party. These, likewise two collected by Grimwood on the Sakeji stream, Mwinilunga district, also on 17th December, show that there is a well marked juvenile plumage. The red on the forehead is completely lacking in the Kafue birds, being replaced by black. In those from Sakeji it is just starting to moult in. In all five specimens, instead of being salmon-pink, the abdomen is white, the centre with a wash of pale yellow. The chin and centre of the throat are distinctly greyish, contrasting with white on the sides of the throat. The ear-coverts are blackish instead of white as in adults, and separated by a line of white from the black of the nape. In one of the Kafue specimens, however, the grey of the chin and throat is much darker, being a dark slate, and there is very little white separating the black of the ear-coverts and nape.

This form apparently extends in fringing forest down the Kafue River as far as Meshiteshi, where an example of this easily recognised species was seen by F. C. Bromley in July last.

(b). The juvenile plumage of the flycatcher *Platysteira peltata mentalis* Bocage.

On 17th December, in fringing forest along the Kafue River at 14°23'S., 27°04'E., I collected two adult males and two adult females undoubtedly

attributable to the above race. One of the males was obtained with the same shot as an unsexed juvenile in which skull-ossification had not started. Five specimens from the Northern Province, in what may be termed sub-adult plumage, are distinguishable from adults as follows:—upperside grey, mantle washed with brown; remiges and their coverts dark brown margined with tawny; rectrices slaty, only slightly glossy, narrowly tipped white, the outermost pair having the whole outer web margined with white; underside white, with chin and throat somewhat greyish, and some chestnut-buff on the chest and flanks; red eye-wattle poorly developed. The juvenile is conspicuously different from sub-adults in the following respects:—upperside barred dark brown and rufous; underside completely white; red eye-wattle completely lacking. The remiges and their coverts, and the rectrices, are as in the sub-adults. One of the sub-adults has a few barred juvenile feathers on the nape, while another has started to moult into adult dress.

(c). The Greater Swamp-Warbler *Acrocephalus rufescens* and some other species on the Luamala River at 14°06'S., 27°08'E.

I recently spent two days in the above locality, on 20th and 21st December. Two males and a female of *Acrocephalus rufescens* were obtained in papyrus swamp, thus extending the range of this species over 200 miles to the south-westward from the Bangweulu area. All three specimens showed gonad-activity, one of the males having testes measuring as much as 6 x 4, 8 x 4 mm., the female with several oocytes of diameter 2 mm. They have been compared with a series of nine adults from the Northern Province. The Luamala birds have on the whole the white of the underside rather more intense, and are rather paler on the upperside. These characters are somewhat analogous to those given by Chapin, Bull. Brit. Orn. Cl. 72, 1952, p. 21, in describing *Muscicapa aquatica grimwoodi*, also from Kafue drainage. However, in the present case I do not consider that the differences are so well marked as to merit separation from *A. r. nilotica* (Neumann). The Luamala birds have wing 77 – 79, compared to 77 – 81 in five males, 75 – 78 mm. in four females, from the Northern Province. Two immature specimens from the latter area are an altogether warmer, more tawny colour. A male (17th August) has wing 74, a female (8th October) 73 mm.

I also collected in this locality on the same visit the following:—*Coturnix chinensis adansoni* Verreaux, *Clamator glandarius* (Linnaeus) (female in immature dress, wing 191, tail 205+ mm.), *Anthus leucophrys bohndorffi* Neumann, *Schoenicola brevirostris alexinae* (Sundevall), *Bradypterus baboecala moreaui* Sclater, *Cisticola brunnescens cinnamoemea* Reichenow, *Cisticola woosnami lufira* Lynes (also in Mumbwa District at 14°14'S., 27°06'E.), *Cisticola pipiens congo* Lynes, *Anthoscopus caroli winterbottomi* White (five specimens, including also from Mumbwa District at 14°14'S., 27°06'E.), *Quelea erythrops* (Hartlaub) (six males with red on head moulting in), *Lonchura fringilloides* (Lafresnaye), *Ortygospiza locustella locustella* (Neave), and *Lagonosticta caerulescens perreini* (Vieillot).

(d). A new race of Moustached Warbler: *Melocichla mentalis luangwae*.

Description: Differs from *M. m. grandis* (Bocage), *M. m. amauroura* (Pelzeln), and *M. m. orientalis* (Sharpe) in the colder, more greyish tone of the upperside; and the paler, less strongly rufous, brown wash of the underside, the edges of the remiges also tending to be less strongly rufous.

Distribution: Luangwa Valley, Northern Rhodesia (Lundazi and Mpika Districts).

Type: In the National Museum of Southern Rhodesia, Bulawayo; ♂, Luangwa Valley at 11°45'S., 32°30'E., 30th July, 1951. Collected by Major W. E. Poles, M.C. Collector's No. 2234, N.M. Reg. No. 7011.

Measurements of Type: Wing 83, tail 92, culmen from base 20 mm.

Remarks: As a result of recent collecting I have re-examined the material in the National Museum. I have already drawn attention to six Luangwa specimens in Occ. Papers Nat. Mus. S. Rhod. 3 (21b), 1956, p. 29. Although no further material from the Luangwa Valley is available, it is considered that these six are nevertheless so distinct as to merit a name. Mr. C. M. N. White as well as Grimwood, has examined the material with me, and both agree. *M. m. luangwae* probably extends at least as far south as Jumbe, in the Fort Jameson sector of the valley, where in February, 1953 I saw and heard the species several times, in rank grass along the Msandile River, but did not collect any specimens. I did collect it in this habitat on the Mupamadzi River, in the Mpika sector. It is noteworthy that specimens were collected in February, June, July and September, so that their distinctness cannot be due to seasonal changes. Their colouration is in fact what might be expected in a relatively dry area such as the Luangwa Valley. I can trace no record of the species south of Jumbe in the valley, and the Check List is somewhat misleading in this respect.

I have had available one of the two Fort Jameson specimens previously examined. It is certainly very close to *M. m. luangwae*. However, the status of birds from this area requires further investigation. On ecological grounds it is more likely that they are attributable to *M. m. orientalis*, of which I have seen seven from southern Nyasaland and five from eastern Southern Rhodesia. I have also had five of the specimens previously attributed to *M. m. amauroura*. A further five, recently collected, also seem best placed with this race, which accordingly extends as far south-west as Mutanda (12°23'S., 26°14'E.), Kasempa and the Luamala River at 14°06'S., 27°08'E. This series of ten is quite strikingly distinct from the six of *M. m. luangwae*, being altogether darker above, without any suggestion of greyness, and richer rufous washed below. A specimen from western Angola and two from the Mwinilunga district I would place with *M. m. grandis*.

Three specimens from the Lake Rukwa region resemble *M. m. luangwae* somewhat in being rather grey on the upperside, but are brighter rufous washed on the underside. They seem best placed with *M. m. orientalis*.

The wing-measurements given by Chapin, Bds. Belg. Congo 3, 1953, suggest that there is very little variation in size throughout the range of the species as a whole. My own measurements, from selected areas in the southern part of its range, including material previously examined in the British Museum, support this:—

Western Angola, 11 specimens: 74 – 81, average 77.1 mm.

Katanga, 5 specimens: 71 – 82, average 77.6 mm.

Northern Rhodesia, west of Luangwa Valley, 16 specimens: 75 – 84, average 79.3 mm.

Luangwa Valley, 6 specimens: 78 – 83, average 79.8 mm.

Rukwa Valley, 3 specimens: 79 – 83, average 81.3 mm.

Nyasaland, east of Shire Valley, above 2,000 ft., 20 specimens: 72 – 82, average 77.5 mm.

Nyasaland, Port Herald area, below 2,000 ft., 8 specimens: 73 – 82, average 76.9 mm.

Eastern Southern Rhodesia, *circa* 2,000 ft., 6 specimens: 76 – 82, average 79.3 mm.

The song as heard in Northern Rhodesia on the Luamala River and in the Luangwa Valley seemed identical with that heard in Nyasaland and elsewhere, see ‘Ibis’, 1948, p. 57. Chapin’s description of the song, *op. cit.*, p. 423, seems to fit birds heard by me very well.

A case of Geographical overlap in Northern Bechuanaland of the *Mirafra apiata* and *Mirafra rufocinnamomea* group of Larks

by MR. MICHAEL P. STUART IRWIN

Received 17th February, 1958

There have been apparent grounds for uniting the *Mirafra rufocinnamomea* and *Mirafra apiata* group of Larks, Macdonald in his review of the *Mirafra apiata* group, *Ibis*, 94, 1952: 629–635, suggested that a detailed study might show reasons for regarding them as conspecific. White, *Bull. B.O.C.*, 66, 1945: 14, notes evidence of a possible link up between *M.a.kalaharica* Roberts, and *M.r.mababiensis* Roberts, in western Bechuanaland, again in *Bull. B.O.C.*, 76, 1956: 53–54, the same author discussed this relationship, but on the strength of a specimen of *M.a.kalaharica* from Dautsa, Lake Ngami, where it may well approach the range of *M.r.mababiensis*, retains them as specific units.

The recently discovered *M.a.nata* Smithers, was at first made a race of *Mirafra damarensis*, a form which was given specific rank by the late C. H. B. Grant. Macdonald (*loc. cit.*), however, regarded it as but another member of the *apiata* group. White in his review of *M.rufocinnamomea* in *Bull. B.O.C.*, 73, 1953: 90–91, retained *M.damarensis* as a race of that group. McLachlan and Liversidge in *Roberts Birds of South Africa*, 1957: 254 erroneously place it with *rufocinnamomea*. An examination of the outer tail feathers should settle its specific relationship. *Nata* on this, and other evidence to be presented is quite certainly a race of *apiata*.

The discovery of the very pallid race *M.a.nata* in north-eastern Bechuanaland brought about the possibility of an overlap with the *M.rufocinnamomea* group. A case of virtual sympatry has now come to light. In April 1957 the Rhodesian Schools Exploration Society, Matabeleland Branch, Expedition to the Makarikari Pan, collected an immature female of *M.r.smithersi* at Mumpswe, 15 miles west of Nata and about 7 miles north of the great pan. The specimen was obtained in mopane woodland.

Consideration must now be given to the ecological requirements of the two groups. The *M.apiata* section inhabits open grassland as against wooded country. *M.a.nata* occurs on open grasslands on white sand along the northern edge of the Makarikari Pan, the bulk of the population being perhaps centred on the delta of the Nata River, where conditions are most favourable. *M. rufocinnamomea* on the other hand is more of a woodland species, in neighbouring Southern Rhodesia being an inhabitant of light

woodland or wooded grassland and mopane on stony ground. On their northern fringe, the Makarikari grasslands give way sharply to mopane woodland of a character not readily suitable to either group. However the mopane woodland encircling the open plains about Mumpswe, is in places sufficiently bare and stony to provide a habitat suited to *M. rufocinnamomea*, hence its occurrence there is not really unexpected.

Due to conflicting ecological requirements, it is unlikely that a geographical overlap exists in the strict sense, pockets of *M. rufocinnamomea* probably occur where the habitat is suitable, on the northern fringe of the range of *M. a. nata*. It is also not impossible that *M. rufocinnamomea* may also be found on the south shore of the Lake, where there is mopane. In this case of more or less ecological allopatry, it is not really necessary to demand that the two forms be found "on the same ground."

Behaviour differences are also apparent in the two groups. *M. a. nata* as observed by R. H. N. Smithers, whose notes I quote: has the typical "flapping" or "crackling" display flight as exhibited by *M. rufocinnamomea*, but on the initial upward flight the first burst of "flapping" may be preceded by a short burst of song, thereafter, after the flapping flight the bird whistles, losing altitude in doing so before rising again to continue its flapping display. In contrast, *M. rufocinnamomea smithersi* as observed in Southern Rhodesia invariably rises to a much greater height, often virtually out of sight and only just audible, and unlike *apiata* is vocally silent when in the air. Both plunge down from a considerable height on ending one of these flights.

The single immature *rufocinnamomea* agrees perfectly with material of *M. r. smithersi* from neighbouring Southern Rhodesia, without showing any sign of intergradation with the *apiata* group. An immature specimen of *M. a. nata* in comparable plumage collected in February 1957, differs from *M. r. smithersi* in having the tips of the feathers on forehead, crown, mantle and wing coverts edged and tipped with white, not having the buffish tipping and russet mantle of *rufocinnamomea*, which also has the tail russet with narrow dark centres to the central pair of feathers, whereas in *M. a. nata* it is greyish narrowly edged with buff. The underparts of *M. a. nata* are whitish, lacking the red tones on the chest of *M. r. smithersi*, spotting on breast more profuse with distinct round feather centres. In *M. a. nata* the bill is also a trifle longer and heavier.

The two species may be separated of the character of the outermost pair of tail feathers. In *rufocinnamomea* the outermost tail feather is creamy buff narrowly edged with brown on the inner web excepting at the tip, second outermost feather brown, cream or buff on outer web. In contrast, *apiata* has the outermost feather broadly edged or wholly brown on the inner web, except at the tip, second wholly brown or very narrowly edged buff or outer web. This character of the outermost pair of tail feathers is diagnostic and would seem to be of specific significance as it holds good in the following forms that have been examined, often in long series: nominate *apiata*, *hewitti*, *kalaharica* and *nata*; and of the *rufocinnamomea* group, in *smithersi*, *fischeri*, *lwenarum* and *mababiensis*.

In preparing this note my thanks are due to Mr. R. H. N. Smithers, Director of the National Museums of Southern Rhodesia for notes on the flight display of *M. r. nata* and for his assistance in elucidating other points concerning these birds.

A New Race of Red Bishop *Euplectes orix* (Linnaeus) from South Africa

by MR. P. A. CLANCEY

Received 10th February, 1958

Two races of the Red Bishop *Euplectes orix* (Linnaeus) are currently recognised in South Africa, these being *Eu. o. orix* (Linnaeus), 1758: Angola, and *Eu. o. sundevalli* Bonaparte, 1850: eastern Transvaal. Roberts, *Birds of South Africa*, 1940, p. 345, admitted a third race from the eastern tropical lowlands of the sub-continent, using for it the name *Eu. o. wertheri* (Reichenow), 1897: Wembere, Tabora district, Tanganyika Territory.

Eu. o. orix supposedly ranges from Angola southward through South-West Africa and Bechuanaland to the Cape Province, Orange Free State, Basutoland, Southern Transvaal and Natal, but recently Chapin, *Birds of the Belgian Congo*, part iv, 1954, p. 421, has questioned this arrangement, observing that breeding male topotypes in the American Museum of Natural History have wings 71 – 74, as against 75 – 79 mm. in South African specimens of *Eu. o. "orix."* No topotypical specimens of breeding males of this bishop are currently available in South African museums, nor are there any in the British Museum (Nat. Hist.), London, but through the kindness of Dr. A. L. Rand, of the Chicago Natural History Museum, U.S.A., I have been able to study a pair from Huila, Angola, collected by Gerd Heinrich in 1954. Size details of six other Angolan topotypes have kindly been furnished by Drs. Dean Amadon and Charles Vaurie, of the American Museum of Natural History, New York. The American Museum specimens are from Humpata, Mossamedes, and Fort Quilenges, Benguela, and were collected by Ansorge and Mocquerys. Angola specimens agree with those of South-West Africa, northern Bechuanaland, Southern Rhodesia and the northern Transvaal, but not with those from further south, which are substantially larger.

Angolan topotypes of *Eu. o. orix* have wings 73 and 74+ mm. as measured by myself, and 72 – 74 (72.7) mm. in the six specimens in the American Museum measured for me by Vaurie. Two specimens from Ovamboland, in the extreme north of South-West Africa, in the collection of the Transvaal Museum have wings of 70.5 and 71 mm. Eight Southern Rhodesian examples have wings 68 – 73 (71.0) mm., while five northern Transvaal specimens measure 71 – 74 (72.6), and six southern Portuguese East African specimens 66 – 71 (68.3) mm. Three eastern Transvaal skins in the American Museum have wings of 69.5 – 71 (70.5). Cape Province birds are much larger than those just dealt with. Sixteen breeding males have wings 75.5 – 80 (78.0) mm., and similar large-sized birds are found in the Orange Free State and southern Transvaal – wings of thirteen males 75 – 81 (76.9), and Basutoland – wings of seven males 76 – 79 (76.7). Natal birds are again small, and not separable on size from Angolan topotypes. Twelve Natal breeding males have wings 70 – 75.5 (73.0) mm. An old Verreaux skin from Port Natal (*i.e.*, Durban) in the Academy of Natural Sciences of Philadelphia has a wing of 70 mm., while another also in the Academy's collection from Ulundi, Zululand (*ex*. Tristram collection), likewise has a wing of 70 mm. It is clear from the above measurements that the populations of Natal and Zululand, Swaziland, eastern and

northern Transvaal, Southern Rhodesia, Bechuanaland, South-West Africa and Angola consist of birds of similar size, and that *Eu. o. sundevalli* (type-locality: eastern Transvaal) is a synonym of *Eu. o. orix* (type-locality: Angola). The much larger birds of the Cape Province, Orange Free State, Basutoland and the southern Transvaal, hitherto placed as *Eu. o. orix*, must be separated as a new race, and for this I propose the name:

Euplectes orix turgida, subsp. nov.

Type: ♂, adult. Citrusdal, south-western Cape Province, South Africa. 20th October, 1955. Breeding. Collected by Dr. J. M. Winterbottom. In the collection of the South Africa Museum, Cape Town, Mus. Reg. No. S.A.M. 20218.

Diagnosis: Similar to *Euplectes orix orix* (Linnaeus), 1758: Angola, with which it has hitherto been confused, but differs in being larger in all respects. Wings of 16 paratypical males of *Eu. o. turgida* from the Cape Province 75.5 – 80 (78.0), as against 71 – 74 (73.1) mm. in 8 males of *Eu. o. orix* from Angola. Not constantly separable on colour grounds.

Material: (Adult breeding males only). *Eu. o. turgida*, 37 (Cape Province, 17; Orange Free State, 1; Basutoland, 7; southern Transvaal, 12). *Eu. o. orix*, 36 (Gordonia, north-western Cape, 1; northern South-West Africa, 2; Angola, 2; Southern Rhodesia, 8; southern Portuguese East Africa (see "Remarks"), 6; northern Transvaal, 5; Natal, 12. *Eu. o. nigrifrons*, 2.

Measurements of the Type: Wing (flattened) 76.5, culmen from base 18, tail 43.5, tarsus 23 mm.

Range: The whole of the Cape Province with the exception of the Gordonia district in the north-west, Orange Free State, Basutoland, and the highveld areas of the southern Transvaal. Intergrades to the north of its stated range with *Eu. o. orix*.

Remarks: The sixteen Cape paratypes of *E. o. turgida* have culmens 17 – 18.5 (17.6), and tails 40.5 – 46 (43.8) mm. Fifteen males of *Eu. o. orix* have culmens 15 – 17 (16.1), tails 36.5 – 43 (38.3) mm. 39 mm. seems to be the normal upper limit of the tail-length in *Eu. o. orix*, but three males from near Bulawayo, Southern Rhodesia, have tails of 42, 43, 43 mm., which measurements are within the size-range of *Eu. o. turgida*. The six southern Portuguese East Africa specimens measured by me have culmens of 14.5 – 16 (15.5), tails 35.5 – 38 (36.8) mm. Females of *Eu. o. turgida* have wings of 68 – 73 mm., those of *Eu. o. orix* 60 – 66.5 mm.

As noted earlier in this paper, Roberts, *loc. cit.*, considered that the small birds of the eastern tropical lowlands of sub-continental South Africa should be kept separate from those of the interior, and called them *Eu. o. wertheri*. *Eu. o. wertheri* is often placed as a synonym of *Eu. o. nigrifrons* (Böhm), 1884: Karema, Ubende, western Tanganyika Territory, by workers, but Chapin, *loc. cit.*, believes there may be grounds for recognising it. In any event, *Eu. o. wertheri* is unlikely to range to South Africa, and the small birds with wings 66 – 70 mm. occurring in the Portuguese East African lowlands to the north of the Limpopo River appear to be inseparable from *Eu. o. nigrifrons*. In addition to being smaller sized, *Eu. o. nigrifrons* differs from *Eu. o. orix* in having a much narrower black frontal band and in being rather more orange red. Chapin *loc. cit.*, claims that the mantle of *Eu. o. nigrifrons* is paler than that of *Eu. o. orix*,

but I have examined birds with very pale mantles from within the range of the nominate race, and such pallor seems to be due mainly to wear and bleaching. The character is not mentioned at all by Mackworth-Praed and Grant, *Birds of Eastern and North Eastern Africa*, vol. ii. 1955, pp. 950–951, who give the southern range limits of *Eu. o. nigrifrons* as western Nyasaland. The Portuguese East African populations of the Red Bishop occurring to the south of the Limpopo River are difficult to place. They are small-sized like *Eu. o. nigrifrons*, but the breeding males have the deep red of *Eu. o. orix* and similar broad black frontal bands. They appear to represent an intergrading population *Eu. o. orix* $\geq$ *Eu. o. nigrifrons*.

Three races of the Red Bishop can be recognised from South Africa, and the nomenclature, characters and ranges of these are as follows:

1. *Euplectes orix turgida* Clancey, 1958: Citrusdal, south-western Cape Province, South Africa.
Forehead and fore-crown black. Size largest.
Wings ♂♂ 75 – 81, ♀♀ 68 – 73 mm.
Range: As defined in the above description.
2. *Euplectes orix orix* (Linnaeus), 1758: Angola. (syn. *Eu. o. sundevalli* Bonaparte, 1850).
Similar to *Eu. o. turgida*, but consistently smaller.
Wings ♂♂ 70 – 74, ♀♀ 60 – 66.5 mm.
Range: Southern Angola, South-West Africa, Gordonias district of northern Cape Province, western and southern Northern Rhodesia, Bechuanaland Protectorate, Southern Rhodesia, northern and eastern Transvaal, southern Portuguese East Africa to the south of the Limpopo River (intergrades with *Eu. o. nigrifrons*), Swaziland, Natal and Zululand.
3. *Euplectes orix nigrifrons* (Böhm), 1884, Karema, Ubende, western Tanganyika Territory.
Similar to *Eu. o. orix* but adult male with only forehead black, and red surfaces often more orange, less pure vermilion. Smaller in size.
Wings ♂♂ 63 – 70, ♀♀ 54 – 60 mm.
Range: Southern Portuguese East Africa to the north of the Limpopo River, eastern Northern Rhodesia, Nyasaland, northern Portuguese East Africa to Tanganyika Territory, eastern Belgian Congo, central Uganda, and Kenya Colony east to Machakos. (Note: The latter part of the range just given is based on the assumption that *Eu. o. wertheri* and *Eu. o. nigrifrons* are synonymous, which view is contestable).

For the loan of material and assistance I am grateful to the Directors of the South Africa Museum, Cape Town (through Dr. J. M. Winterbottom); Transvaal Museum, Pretoria; Natal Museum, Pietermaritzburg; Museu Dr. Alvaro de Castro, Lourenço Marques. For the loan of two Angola topotypes of the nominate race of *Eu. orix* I am indebted to Dr. A. L. Rand, Chicago Natural History Museum, U.S.A., and I am also grateful to Drs. Dean Amadon and Charles Vaurie of the American Museum of Natural History, New York, for details of Angolan material in their charge. Dr. James Bond, Academy of Natural Sciences of Philadelphia, U.S.A., has kindly provided useful information on the Academy's South African material of *Eu. orix*.

Tunstall's Ornithologia Britannica, 1771

by THE LATE CAPT. C. H. B. GRANT AND MR. C. W. MACKWORTH-PRAED

Received 22nd December, 1957

In *Bull.B.O.C.* 77, p. 48, 1957, we gave four names which should replace those of Tunstall. Mr. H. E. Wolters has very kindly drawn our attention to the fact that *Motacilla boarula* Linnaeus, 1771, is preoccupied by *Motacilla boarula*, Scopoli, *Ann.I.Hist.Nat.* p. 154, 1769, which is a Yellow Wagtail, and that the next available name for the Grey Wagtail would be *Parus caspicus* S. G. Gmelin, *Reise durch Russl.* 3, p. 104, 1774; Enzeli, Iran. The specific name of the Grey Wagtail will then be *Motacilla caspica* (Gmelin).

New Names Published Privately

by THE LATE CAPT. C. H. B. GRANT

Received 9th January, 1958

The term 'published privately' has always, I believe, been held to convey that such new names have not been published in accordance with accepted conditions of introducing new names to science. They are therefore not available to the public, have no standing in nomenclature and are, in fact, nomenclatorially non-existent.

If these new names are adopted and are made available to the public by a later worker, then the later worker is the author. This is, I think, the accepted way of looking at this question of 'privately published' new names. This preamble of known procedure brings me to the following case of new names which I consider has been misinterpreted and mishandled by the I.C.Z.N.

Non-existent new names cannot very well be considered or discussed in print by any systematic ornithologist nor by any body recognised by ornithologists, and when this case was placed before the I.C.Z.N. they should have pointed out to the submitting party that they could express no opinion on such names. This, however, they failed to do, and allowed Vaurie to publish fourteen *nomina nuda* by printing them themselves in *Bull. Zool. Nom.* II, p. 344, 1956. In *Ann. & Mag. N.H.* Ser. 12, p. 366, 1956, Grant made these names available to the public by placing in print a copy of the original 'privately published' pamphlet. The I.C.Z.N. *Ops.* Dec. 16, pt. 23, p. 419, 1957, have considered these properly introduced names to be homonyms of nomenclatorially non-existent names, ignoring Vaurie's action.

Grant's action in making these names available to the public was therefore perfectly in order and this is the first time they have been properly introduced into nomenclature, but he has not adopted them, expressly stating who the author should be. Grant has, in fact, submitted new names for publication on behalf of some other author whose name he has given and which appears to agree with Article 21 of the *Int. Rules Zool. Nom.*

The new names in the *Ann. & Mag. N.H.* cannot be homonyms, as one cannot have a homonym of a nomenclatorially non-existent name nor of a *nomen nudum*.

Notices

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Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available. Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1958

20th May, 16th September, 21st October, 18th November, 16th December.

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If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

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Communications are not restricted to members of the British Ornithologists' Club, and contributions on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

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~~PURCHASED~~
- 1 SEP 1958

Edited by
DR. JEFFERY HARRISON

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AUG 1958



Owing to the proximity of the meeting arranged at short notice by the B.O.U. for the 21st May, 1958, no club meeting was held in May.

Ornithological Nomenclature and Nomenclatorial Procedure

This treatise by the late Captain C. H. B. Grant has now been published. Copies are obtainable from Mr. C. W. Mackworth-Praed at the Bird Room, British Museum (Natural History), Cromwell Road, S.W.7. Price 7/6d.

Snake and Lizard Predators of Birds

by CAPTAIN CHARLES R. S. PITMAN

Received 8th November, 1957

These notes are almost entirely concerned with Africa.

Part II.

SNAKES

(iii) Cobras

The bird and egg-eating cobras include: (a) Egyptian, (b) "Spitting", and (c) Cape — all three being terrestrial; (d) Black-lipped, which is partially aquatic; and (e) Gold's, a forest species which is to a great extent arboreal. All these snakes grow to a considerable size, some of them to as much as 9 feet in length.

General. Rose ⁽¹⁷⁾ p. 287, speaking generally of cobras says that they eat birds, and again on p. 297 "feeds on birds' eggs"; also ⁽¹⁸⁾ p. 25 "will eat fowls' eggs as opportunity offers."

Villiers ⁽⁹⁾ p. 111, records that birds are included in the diet of cobras. Isemonger ⁽²⁸⁾ p. 83, says that eggs are one of the main items in a cobra's diet.

Mr. H. G. Symons (*in litt.*) from Natal: "Seen a cobra swallowing well-feathered guinea fowl chicken."

Mr. A. F. Ayre writing from Kenya tells of a cobra (probably *Naja haje*) about seven feet long which swallowed eight hen's eggs and evidently struck the hen, which died. It approached the nest from above along a frame, from which it had to bend down to seize the eggs.

Mr. D. Fyfe, when in the Southern Sudan, hearing a commotion at 2.30 in the morning went out to investigate and found a small boy killing a cobra $5\frac{1}{2}$ feet long which had swallowed four chickens, about twice the size of one's fist, and had a fifth in its mouth. Cobras swallow hens' eggs whole and without breaking them.

(a) *Naja haje*, Egyptian Cobra. Corkill ⁽³⁾ p. 23, "It feeds mainly on frogs and toads, birds and birds' eggs. Its fondness for eggs probably accounts for it being so often found near villages where fowls abound."

Tasman during many years' residence in Southern Rhodesia has only once come across this cobra, which is common, feeding on birds — having swallowed five ducklings (but there may have been traces of ducklings in another), and once taking eggs — an entire sitting of a dozen having been consumed, without any of the chickens around having been molested.

(b) *Naja nigricollis*, Black-necked or "Spitting" Cobra.

Corkill ⁽⁸⁾ p. 25: "largely nocturnal in habit and preys on mammals, birds, lizards, snakes and birds' eggs."

Loveridge ⁽¹⁴⁾ p. 14, records that birds are included in its dietary. An example he shot in Mombasa (Kenya) which was over five feet long had a young pigeon in its stomach and two pigeons' eggs in its gullet. During the three previous nights it had killed six pigeons, two pigeons and one pigeon respectively. In the same locality a $5\frac{1}{2}$ foot cobra was killed while swallowing a chicken. At Morogoro, in Tanganyika, one of these cobras was killed which had bitten a hen and three of her brood, and which contained one chicken in its stomach and a chicken's head in its gullet (evidently knocked off the body when the snake was hit).

Isemonger ⁽²⁶⁾ p. 53, graphically describes how he watched a pair of black-necked cobras consume a brood of eight weeks old francolins, as well as killing the parents. He emphasizes this cobra's partiality for baby chickens and eggs, and its persistence as a raider of the hen roost, quoting how one farmer, in Southern Rhodesia, lost 15 Black Orpington hens, plus numerous chicks and eggs over a period of a few months before he finally sat up one night and killed the snake with a shot gun as it was entering the poultry-run.

The writer, in Kenya, has on three occasions identified this snake as a predator of the hen roost, twice when it had swallowed a number of eggs and once when both eggs and small chicks had been taken. It is possible that this cobra, and *N. haje*, may take considerable toll of the eggs of game birds.

Cansdale ⁽¹⁾ p. 41, states that birds are included in its diet.

Ionides (*in litt.*) mentions that an example of this cobra when caught in Tanganyika disgorged five unbroken fowl's eggs.

There is a widespread belief among Africans that this cobra when robbing the hen roost 'spits' in the eyes of the brooding hens to prevent them interfering with it.

Colley, from Tanganyika, records a *Naja nigricollis* stomach filled with chicken feathers.

(c) *Naja flava*, Cape Cobra.

I have no specific instances of the Cape cobra preying on birds or their eggs, but this species is included in Rose's remarks ⁽¹⁷⁾ ⁽¹⁸⁾ on the diet of South African cobras.

(d) *Naja melanoleuca*, Black-lipped or Forest Cobra. Cansdale (¹) p. 39, says birds are included in its diet.

Stones (¹⁵) p. 153 "generally preferring rats, mice and chickens." Also, see *ante* the final remark under *Dendroaspis jamesonii* and *Dendroaspis viridis*.

The writer has twice come across cases, at Entebbe in Uganda, of this cobra entering hen houses and swallowing eggs.

On the north-western side of Lake Victoria, in Uganda, there is a group of small, rocky islets called Massambwa. The largest is partly covered with knee-high scrubby vegetation and coarse grass and is a breeding ground for hundreds of Grey-headed Gulls, *Larus cirrocephalus*, which nest from June to October, and some 60 pairs of Sacred Ibis, *Threskiornis aethiopica* which also nest on the ground during the eight months March to October. As these ibis have two separate breeding seasons during this period it is possible that different birds nest there according to season. Also, at the southern end of the islet there is twice a year on a few bushes a nesting colony of cormorants (*Phalacrocorax*), darters (*Anhinga*) and egrets, *Egretta garzetta*.

The nearest mainland is five miles distant and the mouth of the Kagera river — the current from which flows towards Massambwa — seven miles away. The largest Massambwa islet carries an astonishingly abundant population of black-lipped cobras, *Naja melanoleuca* and puff adders, *Bitis arietans*, which presumably in the first instance reached the islet on the Kagera current and probably travelled on floating papyrus and other vegetation. The first time the writer visited this islet, when the gulls were commencing to nest, he was appalled at the number of cobras, up to 6 feet and over and massive puff adders which he saw within a few minutes of landing. It was evident that the cobras preyed on the gulls' eggs, but on what the puff adders subsisted was not then ascertained. A reliable African naturalist, who was later sent on several occasions to investigate this gullery, told me on his own volition that the puff adders were feeding on young gulls and the cobras on the eggs. What astonished me was the unexpected indifference with which the noisy gulls treated the snakes. The snakes were so well nurtured that there must be an adequate food supply throughout the year, but the highly aquatic black-lipped cobra would never go hungry as it is also a fish-eater.

(e) *Pseudohaje goldii*, Gold's Arboreal Cobra. Although reputed to eat birds, which is likely, I have been unable to obtain specific evidence of this, probably because it is a rather rare, little-known species.

(iv) Ringhals

Sepedon hemachates, Ringhals. According to Rose (¹⁸) p. 141, birds are not included in the diet of this South African snake.

But H. Roberts (Transvaal) once found a partly digested Grey-headed Sparrow, *Passer griseus diffusus* in the stomach of a ringhals. He also says that the ringhals seems "to spend a lot of time worrying the bird life," and that it preys on the nestlings of Puff-back Shrike, *Dryoscopus cubla*; Masked Weaver, *Hyphantornis velatus*; and Bulbul, *Loidorusa tricolor* (Austin Roberts' nomenclature).

(v) Vipers

(a) *Viperus berus*, Adder.

According to Malcom Smith ⁽²⁸⁾ pp. 247-248, "Birds' eggs and young birds in the nest are often eaten and, although adders are not regular climbers, they will climb in search of a meal." But birds do not constitute an important item in the adders' diet.

Dr. Kai Curry-Lindahl, the Director of the Zoological Department of the Nordiska Museum, Stockholm (*in litt.*), referring to this viper: "eats eggs and bird nestlings. Every summer there are records of bird-eating adders, and I have witnessed it myself."

(b) *Cerastes cornuta*, Desert Horned Viper.

Corkill ⁽³⁾ p. 28, says, "is usually considered to feed on birds" and knows of specific cases which, however, he does not record. He also states that this snake is "a great bird eater." Unfortunately, there is little in the published literature to elaborate what appears to be a well-known characteristic.

Colonel R. Meinertzhagen tells me that in the Sahara, near Laghouat, he saw a small Desert Lark, *Ammomanes phoenicura* which he was on the point of shooting for a specimen, taken by a sandy coloured Horned Viper, *Cerastes cornuta*. He then watched the snake swallow the bird, a process which he graphically describes as "disgusting."

(c) *Bitis arietans* (= *lachesis*), Puff Adder. Bogert ⁽¹⁹⁾ p. 100, refers to a puff adder which "had eaten a small weaver bird of the genus *Euplectes*."

Loveridge ⁽²⁵⁾ p. 19, mentions an adult puff adder which "had eaten quite a large bird to judge by the undigested quills in its stomach"; but he emphasizes that these snakes are mainly rodent eaters.

H. G. Symons writing from Natal tells me that he once killed a puff adder with two fowl chickens in its stomach.

The writer has personally examined the stomach contents of fully one hundred puff adders without ever coming across any bird remains.

For reference to the puff adder preying on young gulls on the largest Massambwa islet in Lake Victoria, see the previous remarks under *Naja melanoleuca*.

(d) *Bitis gabonica*, Gaboon Viper. Cansdale ⁽¹⁾ p. 49, says "there are records of birds . . . being taken."

Schmidt ⁽²⁰⁾ p. 143, referring to a specimen collected in the Belgian Congo, "contained a large bird (a rail) about the size of a pigeon."

(vi) Egg-eater

Dasypeltis. All species of the curious African genus *Dasypeltis* are exclusively egg-eaters and it seems that their diet is restricted to the fresh eggs of birds, for in captivity they will not feed on lizards' eggs. At the back of the neck there are projections downwards from the vertebrae which help the snake to slit an egg, when the contents are swallowed and the shell ejected from the mouth. The gular skin is so astonishingly extensible that a slender specimen only three feet long can swallow a hen's egg! The first time the writer put his hand into a weaver bird's nest (*Ploceus castanops*) in Uganda — suspended above the water on an islet in Lake Victoria — it was occupied by an egg-eater which was evidently sleeping off its meal, for its stomach was full of yolk. In the next few weeks many well-fed egg-eaters were found in nests in the colonies of

Ploceus cucullatus and *Ploceus nigerrimus* examined on numerous islets. Since then many egg-eaters have been found in bird's nests, mainly weavers, and twice large examples examined which had been killed in hen houses. It is to a considerable extent arboreal.

Mr. F. W. Fitzsimons has recorded that an egg-eater tried to swallow a turkey's egg and died ; while a smallish one essayed to swallow a duck's egg, with fatal results to itself ; and yet another died after fruitlessly trying to break an ingested china nest-egg.

Dr. Kai Curry-Lindahl (*in litt.*) refers me to ⁽²¹⁾ p. 47, in which he describes how an egg-eater in a tree was furiously attacked by some *Parus fasciventer*, who evidently recognized it as an enemy.

Dr. V. Fitz Simons, writing from the Transvaal Museum, mentions that he has found the egg-eater preying on the eggs of various species of larks.

Loveridge ⁽⁵⁾ p. 246, describes how an egg-eater took two Bronze Mannikin's (*Spermestes cucullatus*) eggs, although slightly cracked, which had been taken from the stomach of a boomslang (*Dispholidus typus*); and ⁽⁶⁾ p. 257, referring to an egg-eater killed in Uganda: "stomach and intestines distended with quantities of yolk, in bulk about equalling the contents of three hen's eggs."

Rose ⁽¹⁷⁾ p. 258 and ⁽¹⁸⁾ p. 99, says a species of egg-eater which frequents the Natal coastal strip "seeks out the eggs of sea birds."

(vii) Constrictors

The constricting *Boidae* in Africa range in size from (a) *Python sebae*, the huge python to (b) *Eryx colubrinus*, the small burrowing sand-boa, the only two species with which these notes are concerned.

(a) *Python sebae*, African Python. The bird-eating habits of the python, particularly ducks, wherever it occurs in Africa and Asia are too well-known to need much elaboration, but a few instances are worth recording here.

Ionides (*in litt.*) records finding in Tanganyika a Fork-tailed Drongo, *Dicrurus adsimilis* in the stomach of a juvenile *Python sebae*, and seeing one of these snakes with a young Red-eyed Dove, *Streptopelia semitorquata* in its mouth.

On an island in Lake Victoria, near Kisumu (Kenya), Meinertzhagen and a companion watched a huge python, which he eventually shot, high up in the trees swallowing the nestlings of *Anhinga* and *Phalacrocorax*.

In Northern Rhodesia, Major W. E. Poles watched a python stalking a group of francolins ; Mr. J. B. Shenton records that a 10 ft. python regurgitated a freshly captured guineafowl while he photographed it ; and Attwell has on one occasion found a guineafowl and on another a domestic chicken inside a python. These observations are by members of the Game and Tsetse Control Department of Northern Rhodesia.

Loveridge ⁽⁶⁾ p. 233, records finding the remains of a young bird in a python in Kenya ; and ⁽¹¹⁾ p. 260, that a large python, in Tanganyika, when struck disgorged a fowl.

Ayre, writing from Kenya, tells of a python taking fowls.

Mr. E. Wilson (*in litt.*) caught a small python at a large, dry-season *Quelea* roost in the Sudan which disgorged about six *Quelea*.

Granville, who has long experience in Sierra Leone, writes that the python is common in the permanent freshwater swamps in the flood area and that a reliable African, who habitually fished and trapped birds in these

swamps, had told him that the python preys on various waterfowl, and specifically mentioned the African Jacana, *Actophilornis africanus* and the Pigmy Goose, *Nettapus auritus*.

(b) *Eryx colubrinus*, Sand Boa.

Cansdale ⁽¹⁾ p. 23, states it preys on small birds.

Loveridge ⁽¹⁴⁾ p. 2, says "It feeds upon mice and small birds which it constricts in true boa fashion"; and ⁽²²⁾ p. 142, records that "the late Blayney Percival once told me he had surprised a (sand) boa at Voi trying to swallow a Caspian Plover (*Charadrius asiaticus*), but the migrant proved too big a mouthful and after a couple of futile attempts the snake gave it up" (also see ⁽²⁴⁾ p. 127).

Corkill ⁽³⁾ p. 13, "Small birds . . . form its prey; they are killed by constriction before being swallowed."

Pitman ⁽²⁾ p. 63, "feeds on small rodents and birds up to the size of a quail, the last-named constituting a large meal."

Mrs. Susan McKay, writing from the western shore of Lake Rudolf (Kenya), tells how she has twice seen an African Pied Wagtail, *Motacilla aguimp* in the coils of a sand boa; while on another occasion she disturbed one which was about to seize a Little Stint, *Calidris minuta*.

[To be concluded]

The White Neck Spot Variant in the European Green-winged Teal and the Yellow-billed Teal

by DR. JAMES M. HARRISON AND DR. JEFFERY G. HARRISON

Received 10th March, 1958

The presence of a white spot on the neck of the drake European Green-winged Teal, *Anas crecca crecca* Linnaeus, is now proving to be a not uncommon variant. This spot is always situated in the same position, in the mid-line of the neck anteriorly, at the junction of the chestnut with the grey and white barring of the upper breast, but lying within the chestnut of the neck. Six examples of the variant have now been obtained as follows and are now in our collections:—

27th January, 1931;	Northcotes, Lincolnshire.
23rd January, 1941;	Earith Marshes, Cambridgeshire.
1st December, 1951;	Medway Estuary, Kent.
15th December, 1951;	Medway Estuary, Kent.
27th October, 1957;	Medway Estuary, Kent.
15th February, 1958;	Medway Estuary, Kent.

The true incidence remains to be worked out. Of 23 drakes examined in 1951, two had the white spot¹; but in the 1957–8 winter only one was found in 44 drakes. However, the fact of its fixed position and that it recurs with some regularity indicates that it is a significant pattern variation and not an example of haphazard albinism. This bears out our suggestion that the character may well represent a reversionary trend with evolutionary significance.

Further most interesting evidence in this direction is provided by a Yellow-billed Teal. Through the kindness of Captain J. V. Wilkinson, we have been able to examine a series of this species, 17 from the Falkland Islands and four from Chile, all of the race *Anas f. flavirostris* Vieillot,

which he obtained while in command of H.M.S. "Protector" and brought back in the deep freeze. The bird in question, an immature drake, was obtained on 12th March, 1957 at Port San Carlos, Falkland Islands.

The races of the Yellow-billed Teal are grouped by Delacour⁴ as the South American Green-winged Teal and are placed next to the Northern Green-winged Teal, *Anas crecca*. There seems no doubt that the two species are closely related. The Yellow-billed Teal is a species showing absence of sexual dimorphism, the plumage being predominantly female in character. The head and neck are brownish, speckled with black and there is the same distinct dividing line between this colour and the paler buff breast with large black spots. The young drake already mentioned is remarkable in having the same white neck spot as we have found in the European Green-winged Teal, situated in identically the same position. This must surely indicate that the white neck spot is an ancestral character common to both of these closely related species.

In earlier papers,^{2,3} we have suggested in the case of the European Green-winged Teal, that the white spot may represent a reversion towards the white neck ring, as seen typically in the Mallard, *Anas platyrhynchos platyrhynchos* Linnaeus. Delacour⁴ considers that the whole group of Green-winged Teals are closely related to the Mallards and these variants provide further supporting evidence of this.

We are most grateful to Dr. David Harrison, Lt. Cdr. Alastair McLean, R.N., the late Mr. Foster Stubbs, Mr. J. G. Tatham and Captain J. V. Wilkinson, D.S.C., G.M., R.N. for obtaining specimens for us.

References:—

- ¹ Harrison, James M. "The Birds of Kent" Vol. 1, p. 129. Witherby, 1953.
- ² Harrison, James M. "Exhibition of two varieties of the Teal" Bull. B.O.C., Vol. 66, p. 24, 1946.
- ³ Harrison, Jeffery G. "Further Comments on Teal Variations" Bull. B.O.C., Vol. 75, pp. 120-1, 1955.
- ⁴ Delacour, Jean. "The Waterfowl of the World" Vol. 2, p. 87, London, 1956.

The Baikal Teal in the British Isles; A New Record and a Note on the Incidence of the "Bridled" Face Pattern

by DR. JAMES M. HARRISON

Received 6th April, 1958

Occurrences of the Baikal Teal, *Anas formosa* Georgi, in the British Isles have always in the past been regarded with scepticism, as this bird is known to be a favourite species in captivity especially on the Continent. This view is maintained by Bannerman (1958) and he comments as follows (*in litt.* 26.v.58) "I was by no means happy about the Fair Isle record and enclosed the bird in brackets" (see Bannerman,¹ *The Birds of the British Isles*, Vol. VII, p.36). However records in the north of the British Isles, including the Fair Isle record referred to above have recently been reconsidered and have met with support from various authorities. In view of this it now seems desirable to see whether these are not in fact referable to genuine immigrants.

The specimen to which this note relates was shot on 5th February, 1958 at Loch Spynie, Elgin, Scotland by a party of guns and, as it was not gathered until the following day, which of the guns actually shot the

bird must remain uncertain. For this information I am indebted to Major Brander-Dunbar of Pitgaveny, while the specimen came to me through the kindness of Dr. J. S. Ash. Identification was not immediately established.

While of course it is admitted that various species of the *Anatidae* are very popular as captivity birds, and the species under consideration particularly so in Holland, one must equally bear in mind that other species of Asiatic origin have occurred as genuine, even if as sporadic immigrants and no questions as to the validity of such records have been raised once satisfactory evidence as to correct identification has been established, so that broadly, there is as much in favour of the acceptance of the appearances of *A. formosa* from time to time in the British Isles as genuine immigrants as there appears to be against their acceptance as such. Hartert² (1912-21) mentions the irregular incidence of *A. formosa* in the British Isles and dismisses them as referable to escapes from captivity.

Of all the records which lay claim to authenticity probably none possesses better credentials than that of the duck of the species which was observed on Fair Isle on 1st October, 1954³. This individual arrived in company with other eastern species, viz:— two Yellow-headed Wagtails, *Motacilla citreola* Pallas, a male Siberian Thrush, *Turdus sibiricus sibiricus* Pallas and an influx of Yellow-browed Warblers, *Phylloscopus inornatus inornatus* (Blyth) and Scarlet Grosbeaks, *Carpodacus erythrinus* Pallas. During the time of its arrival and of these associated species there was a pronounced drift, determined meteorologically from Russia and Siberia to N.E. Scotland. These circumstances particularly have tended to focus the attention of various authorities upon the question of the possible genuine immigration of *A. formosa* into this country, and Mr. Ferguson-Lees, who saw the Fair Isle example commented (*in litt.* 15.v.58) that "it was very wild (wilder than the Common Teal it accompanied)". Kenneth Williamson too writes (*in litt.*) in connection with this record "There seemed no good reason to doubt that it must have been the victim of the same weather conditions"—i.e. those responsible for the influx of eastern species already noted. In reply to an enquiry re the possibility of the bird being an escape from Slimbridge, Mr. Peter Scott commented (*in litt.* 9.v.58) "The Baikal Teal is certainly not an escape from here, in fact I rather doubt whether it is an escape at all. I believe, and we're all agreed here, that these odd occurrences in North Scotland are wild birds".

In view of these opinions and the fact that such species as the Buff-breasted Sandpiper, *Tryngites subruficollis* (Vieillot) and the Siberian Pectoral Sandpiper, *Calidris acuminata* (Horsfield) have found acceptance upon the establishment of satisfactory evidence of correct identification, it makes the hesitant attitude towards the sporadic appearances of this Asiatic duck species appear paradoxical and inconsistent, and would seem to justify a reconsideration of all the relevant records.

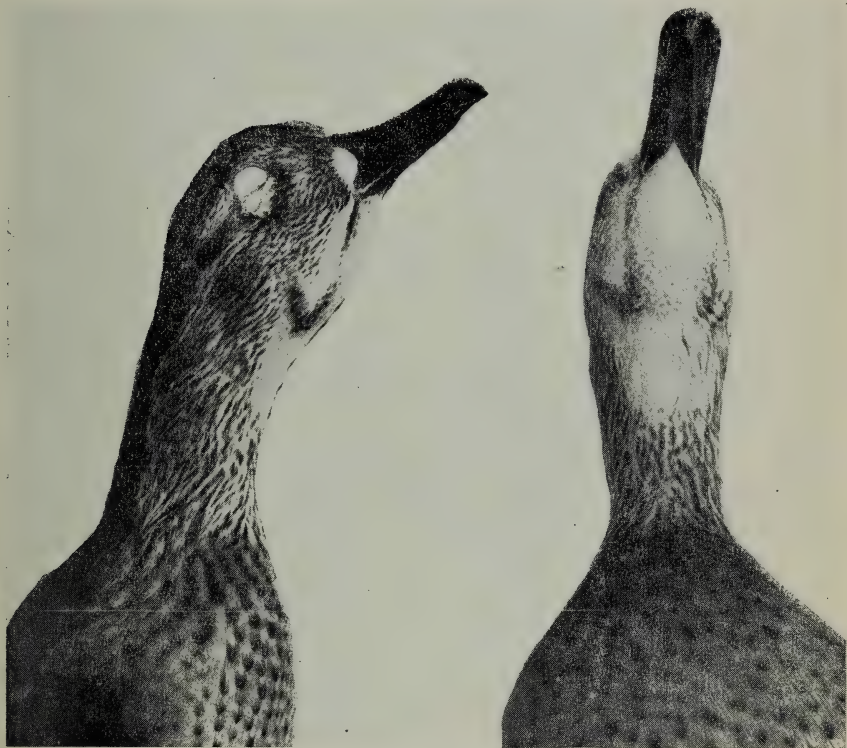
The present specimen shows, as can be seen from the accompanying plate a fully developed, and most interesting facial pattern, which the writer would refer to as "bridled".

In a previous communication⁴ I have suggested that this pattern represents a primitive character of the *Anatidae* for it is found as a rare character in individuals as a recessive mutation, or recombination, with or without the influence of inter-specific hybridisation.

That *A. formosa* represents, in its general characters a primitive duck

is strongly suggested by the fact that, as was shown in the hybrid between a drake Teal, *A. crecca crecca* Linnaeus and a duck Shoveler, *A. clypeata* Linnaeus, an individual closely resembling the drake of *A. formosa* resulted, a phenomenon which the writer referred to as "heterophoric reverse mutation"⁵.

The "bridled" facial pattern appears to occur in *A. formosa* ducks in an incidence of approximately 15%, though in many individuals its



Head and neck of female *Anas formosa* Georgi showing "bridled" character. Specimen obtained at Loch Spynie, Elgin, Scotland, on 5th February, 1958.

development is far less pronounced than it is in the present specimen which represents the full expression of the character.

The fact that this "bridled" facial pattern has been recorded in two drakes of the European Green-winged Teal, *A. c. crecca* seems to indicate that this species and *A. formosa* have a close phylogenetic affinity.

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- ¹ Bannerman, D., 1958, *The Birds of The British Isles*, VII., 36.
- ² Hartert, E., 1912-21, *Die Vög. der Paläarkt. Fauna*, II, 1317.
- ³ *Fair Isle Bird Observatory Report*, 1954, 4.
- ⁴ Harrison, James M., 1953, On the Significance of Variations of Pattern in Birds, *Bull. Brit. Orn. Club*, 73, 37-40.
- ⁵ Harrison, James M., 1954, Further Instances of Aberrations of Pattern and Colour in The Anatidae. *Bull. Brit. Orn. Club*, 74, 52, 53.

Hybrid Ducks in New Zealand

by MR. BRYAN L. SAGE

Received 15th March, 1958

In a previous issue of this Bulletin (vol. 73: 61–62) Sir Philip Manson-Bahr described the appearance of hybrids between the Mallard *Anas platyrhynchos platyrhynchos* Linnaeus and the New Zealand Grey Duck *Anas superciliosa superciliosa* Gmelin that he saw on the lakes at Rotorua, New Zealand, in May, 1950. Being particularly interested in the subject of hybridization in the Anatidae I decided to obtain some further information on this particular aspect, and I am indebted to Sir Philip for much encouragement in this direction. I must also record my grateful thanks to the Secretary and biologists (in particular Mr. K. H. Miers) of the Department of Internal Affairs at Wellington, who went to considerable trouble to obtain and send to me for study, specimens of these hybrids. Dr. R. Duff of the Canterbury Museum, Christchurch, New Zealand, also kindly lent me several specimens of hybrids. Mr. R. B. Sibson of the Ornithological Society of New Zealand has been most helpful with information.

The notes which follow are not as complete as I should have liked them to be, I had hoped to go into the genetical side of the problem in some detail. However, as I have to take up an appointment in Iraq, it is unlikely that I shall be able to pursue the matter further, the following information is, therefore, placed on record in the hope that it may be of some value to those who are interested in this problem, I am convinced that a close study of the genetics of hybridization between these and other species of *Anas*, correlated with studies of the geological history of the Australasian and Oriental Regions, would throw much light on the evolutionary history of this large group of closely related ducks, which I believe to be of eastern origin. In this connection it is perhaps worth mentioning that the detailed study by Prof. F. E. Zeuner of the systematics of *Troides* Hubner (Lepidoptera-Papilionidae), which deals with the distribution and phylogeny in relation to the geological history of the Australasian Archipelago, contains a considerable amount of information on the latter aspect which could well be utilised when considering the phylogeny of the *Anas* spp. Prof. Zeuner's study was published as *Trans. Zool. Soc. Lond.* XXV: 107–184 (1943).

The Mallard in New Zealand

According to G. M. Thomson (*The Naturalisation of Animals and Plants in New Zealand* 1922) the Mallard was first introduced into New Zealand on several occasions between 1867 and 1881, but apparently none of these survived. From 1896 onwards various successful introductions were made, many birds being reared in captivity and then released in such quantity that by 1915 shooting was permitted. Between 1910 and 1918 nearly 1,350 birds were liberated in South Island. Subsequent to 1906 a successful liberation was made at Lake Okareka near Rotorua, North Island. Mr. R. B. Sibson informs me *in litt* that the Mallard is still comparatively scarce north of Auckland, where pure Grey Ducks may still be found. He believes that the reason for this is climatic; the mild humid climate with only occasional frosts in winter not being congenial

to the Mallard. Over most other parts of the country the Mallard has become a common sight. A striking example of the rate at which the Mallard replaces the Grey Duck under suitable conditions is illustrated at Manawatu, Wellington. When ringing commenced here in 1947 about 60% of the ducks ringed were Greys, but during 1955-1956 the Grey Duck comprised less than 10% of the total number ringed.

Comparative Ecology

The comparative ecology of the Grey and Mallard Ducks in the Manawatu District has been studied by R. W. Balham (see *Emu* 52: 163-191) to which reference should be made for a detailed discussion. The Mallard may be found on quiet river reaches, drains, potholes, lagoons and lakes, including waters in urban areas. The Grey Duck, whilst being



PLATE I

From left to right — Mallard x Grey Duck ♂; Grey Duck x Mallard ♀; Grey Duck ♀; Mallard ♀. In the case of the two hybrid specimens the probable male parent is the first-named.

found in all these localities except artificial waters, also haunts forest gorges, mountain streams and hill reservoirs. The Grey Duck appears to be unable to compete with the Mallard when the latter is present in large numbers. In addition environmental changes, such as drainage and swamp reclamation, have favoured the Mallard whilst causing a general decrease in the Grey Duck population. The Grey Duck still holds its own in the more pristine areas. Ringing returns show that the Mallard is largely sedentary whilst the Grey Duck disperses widely outside the breeding

season. Hunting pressure is excessive for the Grey Duck and quite high for the Mallard. The results of Balham's studies of the food of both species suggests that there must be considerable competition.

The History and Frequency of Hybridization

Exactly when the introduced Mallard first commenced to hybridize with the endemic Grey Duck is not apparently on record, but Thomson (1922) states that suspected hybrids were shot in South Canterbury in 1917 (i.e. no more than seven years after the first major liberation of Mallard in South Island in 1910). This is the only historical information that I have found. Opinions differ as to the abundance and frequency of these hybrids. Mr. R. B. Sibson states *in litt* that in South Island and the southern parts of North Island hybridization has been going on for some time, and that Mallards and hybrids predominate in the shooting bags. Mr. K. H. Miers, however, says that the Mallard x Grey Duck hybrid is not as common as it is often stated to be, and that he knows of no area where a *hybrid* population is supplanting the Grey Duck, though the Mallard itself is certainly doing so in many cases. Personally I believe that the hybrids are a little more numerous in some places than Mr. Miers thinks, but not excessively so. Mr. Miers has kindly provided me with some figures, based on trapping returns, showing the incidence of hybrids in some of the main waterfowl areas, three in North Island and two in South Island. These figures are shown in Table 1:—

TABLE I

Proportion of hybrids in some main waterfowl areas of New Zealand, based on trapping returns.

<i>North Island</i>	Total No. of Ducks	Grey Ducks	Mallard	No. of hybrids
Lake Waihare (Auckland)	2551	2535 (99.38%)	8 (.31%)	8 (.31%)
Wairoa (Hawke Bay)	634	389 (61.36%)	231 (36.44%)	14 (2.20%)
Manawatu (Wellington)	4543	1629 (35.86%)	2896 (63.75%)	18 (.39%)
<i>South Island</i>				
Lake Waihola (Dunedin)	1481	661 (44.64%)	776 (52.41%)	44 (2.95%)
Belfast (Christchurch)	762	331 (43.44%)	398 (52.23%)	33 (4.33%)

These figures are only very approximate, but they do tend to show that the proportion of hybrids is higher in the south than in the north, but in the absence of any detailed studies on the relative abundance of the hybrid populations it is not possible to make any definite statements. Furthermore the situation is complicated by the fact that many private individuals and various societies have bred these hybrids in captivity and then released them. In addition some breeders have even crossed the first generation with Khaki Campbells and then released the progeny! This is

what has happened at Rotorua where Sir Philip Manson-Bahr made his observations. Such a state of affairs as this makes scientific studies difficult to say the least.

Plumage Characters of the Hybrids

Sir Philip Manson-Bahr describing the hybrid birds seen at Rotorua in May 1950 stated that many of them were Mallard-like but lacked the white collar; others had a close resemblance to the male Gadwall (*Anas strepera* (L.)); one had a facial pattern reminiscent of that of the Baikal Teal (*Anas formosa* Georgi.), and some of the females resembled the Indian Spot-bill (*Anas poecilorhyncha poecilorhyncha* Forster.) Whilst the resemblance of these hybrids to various other species undoubtedly has a certain amount of evolutionary significance, for reasons similar to those so ably explained by Dr. James M. Harrison (*antea* 73: 37-40). It would appear that the situation at Rotorua is not typical of that in New Zealand generally but is due to excessive inbreeding and back-crossing as well as random hybridization with domestic varieties. As J. L. Bonhote *Proc. 4th Int. Orn. Congr.* 1905: 256 remarks — "One of the most striking results of hybridization, especially when carried beyond the first generation, is that it seems to produce a flood of variation . . ." It is also interesting to note that Bonhote found that the progeny resulting from his Grey Duck x Spotbill x Mallard trigen could generally be divided into two distinct types, one in which Mallard characters were dominant and the other in which Spotbill characters dominated, the Grey Duck characters invariably being swamped by these two. In other areas of New Zealand, such as the Avon River district of Canterbury, the Mallard x Grey Duck populations appear to be fairly stable.

I have examined five hybrid specimens, two males, two females, and one unsexed. In four of these specimens the exact parentage is unknown but in three cases the Grey Duck is believed to have been the male parent, and in the other the Mallard. The fifth specimen is known to have had the Grey Duck as the male parent. These specimens may be briefly described as follows, measurements are not given as they do not seem to have any significance:—

- (i). Female (2nd from the left in Plate 1), probably Grey Duck male x Mallard female. Obtained Manawatu River, 3rd May, 1947.

Upperparts — darker than female Mallard and similar in shade to the Grey Duck; all feathers with dark buffish-brown borders, the *pattern* therefore resembling the female Mallard. *Wing* — axillaries white; speculum purplish-blue but with distinct greenish gloss. *Head* — throat and neck creamy-buff with fine brown streaks, lores and side of head identical; crown heavily streaked with dark brown. *Upper tail coverts* — uniform dark brown as in Grey Duck.

Underparts — lighter than Grey Duck or female Mallard, feathers predominantly buff with pale chocolate centres, giving a distinctly spotted appearance rather than streaked as in the Mallard (see Plate 1), spotting heavier on upper breast and ground colour darker. Feather *pattern* like Grey Duck but the buffish borders wider and paler.

- (ii). Male, River Avon, Christchurch, 1956. Parentage?

Upperparts — feather *pattern* similar to (i) but ground colour darker than Grey Duck or female Mallard, lighter borders to the feathers much narrower and less noticeable than in (i) thus presenting more uniformly coloured appearance rather

than "mottling." *Crown* — very dark brown; lores and sides of head similar to (i). *Wing* — axillaries white; speculum green with no trace of purple. *Underparts* — similar to (i) but ground colour darker and upper breast with deeper sepia tinge. *Throat and neck* — rather more streaked than in (i).

- (iii). Male (1st on left in Plate 1), probably male Mallard x female Grey Duck. Obtained Rotorua, 25th March, 1956.

Upperparts — similar to Grey Duck but feathers of "shoulders" with pale chestnut V shaped subterminal bars. *Crown* — very dark, almost blackish-brown with greenish sheen; very poorly defined superciliary stripes; cheeks and lores creamy-buff streaked with dark brown. *Wing* — axillaries white, speculum purplish-blue with no greenish gloss. *Rump and upper tail coverts* — darker brown than back and with greenish gloss.

- (iv). Sex? River Avon, Christchurch, date ? Parentage ?

Upperparts — similar in shade to the Grey Duck but the feathers of the back and mantle with buffish borders giving a mottled appearance similar to the female Mallard. *Head* — as Grey Duck but striped appearance much less noticeable. *Wing* — axillaries white, speculum purplish-blue as in Mallard. *Underparts* — as in Grey Duck but ground colour lighter and more pronounced mottling effect on the breast.

- (v). (ex Canterbury Museum). Female, male Grey Duck x female Mallard, 1st generation. Masterton, 20th June, 1944.

Upperparts — mantle, back and rump as (i). *Wing* — axillaries creamy-white, speculum green as in Grey Duck. *Head* — cheeks and lores light buff finely streaked with brown; crown very dark brown, stripe from bill through eye, so marked in the Grey Duck, very poorly differentiated from the crown in this bird.

Underparts — similar to (i) but brown centres to the feathers even less noticeable, appearing rather more like fine streaks. Ground colour of upper breast darker and brown centres rather more prominent. Ground colour of belly and vent darker than breast with conspicuous brown centres.

Generally speaking it seems that the feather *pattern* of these hybrids is similar to that of the female Mallard, but that the *colour* is as dark as the Grey Duck and sometimes even darker. The distinctive striped head pattern of the Grey Duck is in all cases non-existent or very faint. The speculums vary from pure Mallard or Grey Duck to intermediate types.

The duck populations on the lakes at Rotorua have been subjected to releases based on empirical crossings in captivity, including progeny resulting from Mallard x Grey Duck crosses. In one such experiment the majority of the first generation of this cross threw back to the Mallard; the few that threw back to the Grey Duck were then crossed again with pure bred Grey Ducks, of the 100 progeny reared from this back-cross. 75% threw back again to the Mallard and only 25% to the Grey Duck. Unfortunately it seems that no exact descriptions were kept of these birds, but it seems probable that the distinctive breeding plumage of the male Mallard largely disappears in these hybrid populations, the resemblance being more to the female Mallard. Some hybrids, however, as specimen (iii), may have a greenish gloss to the head.

Hybridization in other areas

On certain islands in Micronesia there exists a population of ducks which were separated by Salvadori (*Bull. B.O.C.* No. 20, p.l.) as *Anas*

oustaleti, the Mariana Mallard or Oustalet's Duck. According to Marquis Yamashina (*Pacific Science* 11: 121-124) these populations are in fact the result of hybridization between Grey Ducks reaching the islands from the south, and Mallards from the north. If this is so, then there exists in Micronesia a feral population of ducks of identical parentage to the New Zealand hybrids. It is of interest to note that Salvadori's description as quoted by J. C. Phillips (*A. Nat. Hist. of the Ducks* 2: 53. 1923) agrees very closely in many respects with that given under (iii) above, particularly as regards the speculum and the greenish gloss to the brownish-black crown.

On the Avian Hosts of the Leech *Theromyzon (Protoplepsis) tessellata* (O.F. Muller)

by MR. BRYAN L. SAGE

Received 31st January, 1958

This leech is well known as a parasite of ducks and other aquatic waterfowl and waders in Europe and to a lesser extent in the British Isles. Harding (1910) states that it is of rare occurrence in the British Isles, but there is ample evidence that it is in fact widespread. Mann (1951) states that there are records from Perthshire, Edinburgh, Inverness, Lake District, North Wales, Berkshire, Isle of Man, Devonshire, Somerset, Surrey, Kent, Yorkshire, Suffolk and Shropshire. In addition Brightwell (1842) found it in Norfolk; Johnston (1865) catalogues a specimen from Holy Island Lough; Dalyell (1853) records it from Berwickshire, Linlithgow and the island of Bute; Harding (1910) records it from Cambridgeshire and Rollinson *et al* (1950) give records from Renfrewshire and West Wales, and Brown (1935) states that it is common in Cheshire. In Ireland Thompson (1844) records it from Tuam and Lough Neagh, and Scharff (1898) from Clonbrock, Co. Dublin, and Co. Clare. The vast majority of these records refer to the leech in the free state and not in a host.

When parasitising a host *tessellata* is usually to be found in the nasal cavities, larynx, trachea and oesophagus. Its presence in these situations is by no means always lethal, particularly to an adult host, the leeches dropping off when gorged with blood. Death may be caused on occasions particularly to young ducklings, etcetera, and is usually brought about by choking due to a large accumulation of leeches. A case of this nature is described by Mégnin (1905). Infestation on this scale is probably primarily due to the presence of large numbers of young leeches which have entered the host on the parent, which is known to carry as many as 200 young, each of which require three blood meals to reach maturity. Less frequently the site of infestation may be the eye and some instances of this will be mentioned later.

There are several reports of the activities of this leech as a pest in waterfowl collections. Weltner (1887) states that at a farm at Wanzenau, near Strasbourg, the ducks and geese were nearly all destroyed by *tessellata* which had attached itself to the walls of the oesophagus. Büchli (1924) reports it from the nostrils of ducks in which the brain and its membranes

had congested blood vessels. Rollinson *et al* (1950) describe a case in Berkshire in which the cause of death of young ducklings was attributed to the presence of *tessallata* in the nasal cavities; they also state that it has been found in the nostrils of a South American Steamer Duck (*Tachyeres* sp.) at Slimbridge, which subsequently died. A most interesting case of infestation of the eye is reported by Roberts (1955) who gives full details of a severe outbreak of kerato-conjunctivitis in captive Chinese Geese (*Anser cygnoides* L.) in north-west Shropshire. A specimen of this leech in the collection at the British Museum (Natural History) was taken from a Chinese Goose on the River Serpentine in London in 1880. Christiansen (1939) reports severe eye and nostril infestation in geese in Denmark, and also gives a remarkable record of it being found in the eye of a man.

When we come to consider wild birds as hosts there are somewhat fewer records, although a search of the European literature would doubtless reveal a number. Mann (1951) states that a specimen was taken from the eye of a Great Crested Grebe (*Podiceps cristatus cristatus* (L.)) at Shelve Pool, Shropshire, in 1943. In the collection at the British Museum (Natural History) is a specimen taken from the mouth of a Bittern (*Botaurus stellaris stellaris* (L.)) shot in Hampshire by J. E. Harting in 1890. So far as the ducks are concerned, Mann (1951) states that all the Mallard (*Anas platyrhynchos platyrhynchos* L.) ducklings from the Blagdon Reservoir, Somerset, examined by Miss Fraser of Bristol in 1948 were infected. De Guerne (1892) obtained specimens from the breast plumage of migratory Wigeon (*Anas penelope* L.) and Teal (*Anas crecca crecca* L.) Blanchard (1893) describes two examples from the nasal cavities of the Long-tailed Duck (*Clangula hyemalis* (L.)). Christiansen (1939) records it from the Coot (*Fulica atra atra* L.) Brown (1935) mentions a small specimen found in the nostrils of a Curlew (*Numenius arquata arquata* (L.)) from Loch Rhynd, Perthshire. Finally, an adult Common Gull (*Larus canus canus* L.) found dead by the writer at Hilfield Park Reservoir, Hertfordshire, on 10th November, 1957, had specimens of *tessellata* in the nasal cavities and behind one eye.

Footnote: R. H. Poulding *British Birds* xlvii: 306-307) has recorded this leech from a Herring Gull (*Larus argentatus argentatus* Pontoppidan) obtained at Blagdon Reservoir, Somerset, on 13th February, 1954. This paper was not seen before the above communication was in press.

Acknowledgements

Thanks are due to the Royal Veterinary College and Hospital for confirming the identification of *Theromyzon tessellata*. I am indebted also to Dr. A. R. Jennings of the Department of Animal Pathology, University of Cambridge, for drawing my attention to certain references in the literature. I must also acknowledge the kind assistance of the librarians of the Royal College of Veterinary Surgeons and the British Museum (Natural History).

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A ringed Shag inland in Kent and a note on its cause of death

by DR. JAMES M. HARRISON

Received 1st April, 1958

On 3rd February, 1958 an immature female Shag, *Phalacrocorax aristotelis* (Linnaeus) was found dead on the Kent Wildfowlers' Reserve near Sevenoaks. It had been ringed (Brit. Mus. Ring No. 135. 143) by the Northumberland and Durham Natural History Society on 6th July, 1957 on the Farne Islands as a nestling, and had therefore moved 310 miles S.S.E. (Data *per* R. Spencer, Bird Ringing Committee, Brit. Trust for Ornith.). That this distance represents in fact its actual movements is of course very unlikely.

On examination it was found to be very wasted and its cloaca contained a large calcareous plaque, measuring approximately 50 x 30 mm. and at its thickest point about 5 mm. In the same situation there was a single large intestinal worm which Dr. D. O. Morgan, of the Department of Veterinary Medicine, Cambridge University reported upon as follows:—"This is a pseudophyllidean cestode and almost certainly *Ligula intestinalis*—a species found in diving and wading birds. The larval stage is found in fresh water fish." The gut above the plaque was grossly dilated.

The bird had died as a result of intestinal obstruction, a condition favoured by a diet rich in calcium. This state of affairs is associated with marked dehydration, indeed may have been preceded by it. It is possible that these serious consequences may be determined by an unduly prolonged flight under circumstances which precluded the bird from feeding.

A further inland example of this species, an adult, was seen on an adjacent ballast water in the same area between 15th March and 22nd. The occurrence of quite exceptional numbers of inland Shags in S.E. England in the early part of this year is noted by Mr. I. J. Ferguson-Lees, in the 2nd and 3rd issues of "British Birds" Vol. L1, under "Recent Reports and News."

On the Validity of *Calandrella cinerea niveni* (Macdonald), 1952, described from Natal, South Africa

by MR. P. A. CLANCEY

Received 10th February, 1958

In his revision of the South African races of the Red-capped Lark *Calandrella cinerea* (Gmelin), Macdonald recognised five races from the sub-continent, two of which he described as new to science (*vide Annals of the Transvaal Museum*, vol. 22, 1, 1952, pp. 29 – 32). One of the new races, *C. c. niveni* (Macdonald), 1952: Gezabuzo, near Pietermaritzburg, Natal, has already been the subject of some discussion, being synonymized with *C. c. anderssoni* (Tristram), 1869: Otjimbingwe, Damaraland, South-West Africa, by the S.A.O.S. List Committee, *Ostrich*, vol. xxvii, 4, 1956, p. 179, and even more recently by White, *Bull. B.O.C.*, vol. 77, 7, 1957, p. 120. I now believe that such an opinion is incorrect and that *C. c. niveni* is well-founded, though the characters given for it in the original diagnosis are inadequate and do not serve to differentiate it from its true subspecific affines.

Macdonald's arrangement of the South African races of this widely distributed lark is not entirely substantiated by the large new collections now held in South African museums, and it is clear that much work still remains to be done. It is not my intention to review the South African races of *C. cinerea*, but I would submit the following points: (a) *C. c. cinerea* (Gmelin), 1789: Cape Town, South Africa, is not a greyish race confined to the south-western districts of the Cape Province, but enjoys a wide range throughout most of the province, with the exception of northern Little Namaqualand and the eastern districts, where other forms replace it. (b) *C. c. witputzi* (Macdonald), 1952: Witputs Police Camp, southern Great Namaqualand, South-West Africa, is, as already noted by White, *loc. cit.*, a weakly marked race with a much more circumscribed range than given to it by its describer, who associated with it most of the populations of the nominate race! I do not entirely agree with White that it should be made a synonym of *C. c. cinerea* because of the valid distinction of the rather paler and more pinkish sand-coloured upper-parts (about wood brown, Ridgway, *Color Standards and Color Nomenclature*, 1912, pl. xl). The range of *C. c. witputzi* is still imperfectly known, and I would only associate the populations of northern Little Namaqualand, Great Namaqualand and southern Damaraland under this trinomen. (c) *C. c. anderssoni* does not have the breeding range accorded to it by Macdonald, and it is still known mainly from birds shot from itinerant flocks in the regions extending from central Damaraland to western Southern Rhodesia and the northern Transvaal. White, *loc. cit.*, gives the first records for Northern Rhodesia of specimens taken from a transient flock at Monze, in the Southern Province, in December, 1956. Breeding material of this, the darkest race of the Red-capped Lark, from Lake Ngami and the Makarikari Pan in the collections of the Durban Museum and National Museum of Southern Rhodesia suggests that *C. c. anderssoni* may be a highly localized form breeding on alluvium and dark soils, as found in Ngamiland, just as *C. c. ongumaensis* Grant and Mackworth-Praed, 1955: Onguma, Etosha Pan, northern Damaraland, is an ecological race of the saline pans of northern South-West Africa and Bechuanaland, and

C. c. spleniata (Strickland), 1852: Walvis Bay, Namib, South-West Africa, a race of the white Namib sands. The finding of whitish (*C. c. ongumaensis*) and dark (*C. c. anderssoni*) birds at Ondonga, Ovamboland, by the German collector, Hoesch, is actually of little taxonomic significance, because all populations of *C. cinerea* are highly nomadic when not actually breeding. The finding of two and even three races of the Red-capped Lark in a single area is simply a measure of the extreme plasticity of the species coupled with a pronounced vagous tendency on the part of virtually all races. (d) *C. c. saturator* Reichenow, 1904: Kondeland, south-western Tanganyika Territory, breeds throughout the plateau of Southern Rhodesia and immediately adjacent Portuguese East Africa. It is not listed by Macdonald, though since admitted to the South African list by the S.A.O.S. List Committee.

C. c. niveni was separated from *C. c. cinerea* (the race *C. c. witputzi* as understood by Macdonald) as being "Darker . . . General colour of upper parts about light sepia, or a shade greyer, or less chromatic, than snuff brown. Cap and breast patches are correspondingly darker." and its range given as the "Eastern Cape Province from Port Elizabeth, north-east to Natal." As noted above, the race has already been placed in the synonymy of *C. c. anderssoni* by the S.A.O.S. List Committee, a decision reached on account of the fact that the Committee could not differentiate many specimens from the eastern parts of the range of *C. c. anderssoni*, as given by Macdonald, from topotypical *C. c. niveni*. I have recently compared new material of *C. c. anderssoni* from the northern Bechuanaland breeding grounds and western Southern Rhodesia with good series from the eastern Cape Province, Orange Free State, Natal and the south-eastern Transvaal, and find the populations separated as *C. c. niveni* to consist of distinctly larger and lighter coloured birds. 13 ♂♂ of *C. c. niveni* have wings 96.5 – 104 (99.4), 4 ♀♀ 91 – 96 (92.5) mm., as against 6 ♂♂ 90.5 – 96.5 (94.6), 9 ♀♀ 85.5 – 92 (87.9) mm. in *C. c. anderssoni*. *C. c. saturator* with wings in 7 ♂♂ 90.5 – 96.5 (94.1), and *C. c. williamsi* Clancey of the Kenya Colony highlands with the wings in 9 ♂♂ 91.5 – 97 (94.0) mm. agree very closely in size with *C. c. anderssoni*, but 4 ♂♂ of *C. c. spleniata* in the Durban Museum average slightly smaller, thus – 91.5 – 93.5 (92.4) mm. 12 ♂♂ of *C. c. cinerea* in our collections have wings of 92.5 – 99 (96.3) mm., and 7 ♂♂ *C. c. witputzi* 93 – 98.5 (95.4) mm. *C. c. ongumaensis* I have not measured, but it is not likely to differ significantly in size from any of the races here mentioned, with the exception of *C. c. niveni*.

C. c. niveni does not resemble *C. c. anderssoni* in colouration, but is intermediate in this respect between *C. c. cinerea* of most of the Cape Province and *C. c. saturator* of Southern Rhodesia and adjacent Portuguese East Africa northwards. Compared with *C. c. anderssoni*, *C. c. niveni* in breeding dress appears much paler and more uniform on the upper-parts due to the smaller and less dark feather centres and the reduced amount or absence of russet in the nuchal and mantle feathering. In *C. c. anderssoni* the dark centres to the back feathers are between sepia and black, in *C. c. niveni* pure sepia (Ridgway, pl. xxix); the reddish portions of the feather fringes in the former race russet (pl. xv.), in the latter snuff brown (pl. xxix). While not always immediately apparent in the worn breeding dress, the flight and tail feathers of *C. c. anderssoni* are actually substantially darker than those of *C. c. niveni*, being almost black edged with russet,

and not light sepia edged with fawn. *C. c. anderssoni* stands quite apart from *C. c. cinerea*, *C. c. niveni*, *C. c. saturator*, etc., in its bold black and russet striated upper surface, dark wings and tail. It is appreciably smaller than *C. c. niveni*, though not distinguishable in size from the immediate vicinal forms.

C. c. niveni most closely resembles *C. c. saturator* in the colouration of the upper-parts. A careful comparison of breeding specimens of the two forms reveals that they are remarkably close, *C. c. niveni* being only slightly lighter, duller and more uniform on the upper-parts, owing to the reduction in the size of the dark feather centres and the amount of red on the fringes. The head-top is rather darker, corresponding to russet as against tawny (pl. xv). *C. c. saturator* is distinguishable in the breeding dress from its racial congeners by the rich blackish sepia and tawny diced mantle; in size it is similar to *C. c. anderssoni*, *C. c. williamsi*, etc., but it is smaller than *C. c. niveni*.

The nominate race is somewhat smaller than *C. c. niveni*, and paler and more uniformly coloured above, owing to a further reduction in the size of the dark mesial markings to the feathers and the virtual disappearance of red on the nape and mantle. The fringes of the mantle feathers are about tawny-olive or between tawny-olive and Saccardo's umber (pl. xxix). *C. c. witputzi* is very similar to the nominate race, but, as noted above, is still rather paler and somewhat more pinkish dorsally, the feather fringes of the nape and mantle corresponding to wood brown.

We can conclude that *C. c. niveni* is a nomenclaturally recognisable race on both structural and colour characters. It is the largest of the southern African forms, and is intermediate in colouration and distribution between *C. c. cinerea* and *C. c. saturator*. It is not a synonym of the much darker *C. c. anderssoni*, as listed by the S.A.O.S. List Committee and White. The range of *C. c. niveni* can now be defined as the eastern Cape Province, Orange Free State, Basutoland, Natal and Zululand, and the Transvaal. It intergrades to the north of its ascertained range with *C. c. saturator*, and to the south-west with *C. c. cinerea*.

With perhaps the sole exception of *C. c. anderssoni*, the pattern of variation presented by the South African races of the Red-capped Lark is orthodox: pale populations in the west and south-west in association with increasing aridity and areas of whitish sand and salt-encrusted ground bordering dry saline pans: and darker birds in the moister eastern and south-eastern grassed highland biomes. Records of *C. c. anderssoni*, the darkest race, from across the northern parts of the sub-continent, from central Damaraland to Pietersburg, northern Transvaal, appear initially to distort the otherwise orderly sequence of graded geographical change from east to west in this highly plastic species. The wide range generally accorded *C. c. anderssoni* is deceptive, and I believe that it is no more than a localized race breeding on alluvium and dark coloured soils centred on Ngamiland, which is subject to considerable dispersal in flocks when not actually breeding.

For the loan of material I am grateful to the Directors of the National Museum of Southern Rhodesia, Bulawayo, and the Natal Museum, Pietermaritzburg. I am also indebted to my colleague, Mr. John G. Williams, Ornithologist of the Coryndon Museum, Nairobi, for the gift of a series of *C. c. williamsi* from the Kenya highlands.

Notices

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DINNERS AND MEETINGS FOR 1958

16th September, 21st October, 18th November, 16th December.

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The five hundred and sixty-sixth meeting of the Club was held at the Rembrandt Hotel, S.W.7, on Tuesday, 16th September, 1958, following a dinner at 6.30 p.m.

Chairman: MR. C. W. MACWORTH-PRAED.

Members present, 29; Guests, 4; Total: 33.

Some Activities of a Wildfowlers' Association

1958 is being celebrated as the Golden Jubilee Year of the Wildfowlers' Association of Great Britain and Dr. Jeffery Harrison showed a colour film based on the activities of one of the 77 local clubs—the Kent Wildfowlers' Association. While including some shots of the marshes and wildfowling in progress, the film stressed the importance of conservation and research.

Shots taken on a ballast water reserve showed the use of nesting rafts by Canada Geese and duck traps in operation for ringing. The successful nesting of Little Ringed Plover on this reserve was also filmed. Co-operation with the Wildfowl Trust was emphasized and the technique of viscera extraction for food and parasitic studies was shown, as well as some sequences taken with the Trust's rocket-netting team. The importance of examining the bag for ringed birds, unusual varieties or hybrids was also shown.

Dr. Harrison pointed out that although we had heard much of the "New Naturalists" since the war, he did not think naturalists had changed so much as wildfowlers, to whom the term "New Wildfowlers" really applied. In the discussion, Mr. Max Nicholson said that the film gave an excellent idea of what was meant by the "New Wildfowlers" and the co-operation which was being achieved. He gave a word of warning about the future of Canada Geese and the problem of the Mute Swan was also mentioned.

Snake and Lizard Predators of Birds

by CAPTAIN CHARLES R. S. PITMAN

Received 8th November, 1957

These notes are almost entirely concerned with Africa.

Part III

SNAKES

(viii) Others

This section deals with twelve species, preying to a certain extent on birds, which are not included in any of the preceding categories. They all belong to the *Colubridae*, but can be separated into two groups — the harmless solid-toothed, a few of which constrict their prey; and the venomous back-fanged; five of the former and seven of the latter.

Solid-toothed

(a) *Coluber florulentus*, Southern Flowered Snake.

Corkill (3) p. 16, "small birds have been noted as prey."

(b) *Spalerosophis diadema*, Diademed Whip Snake.

Corkill (3) p. 16, "Rodents and birds are the usual prey."

(c) *Boaedon fuliginosus* (until recently *Boaedon lineatus*), Brown House Snake. Owen (*in litt.*) says he has "found *Boaedon lineatus* in our hedge in Khartoum after young sparrows."

Pitman (2) p. 75, "on occasion it will prey on birds," and on several occasions he has found a small bird in the stomach of one of these snakes. *Boaedon* is a constrictor and simultaneously as it seizes its prey the snake envelops it in its coils with a movement too swift for the human eye to follow.

Pitman (2) p. 75, also refers to Fitzsimons (in South Africa) having found a house snake in a canary's cage after it had consumed the rightful occupant.

(d) *Philothamnus irregularis*, Northern Green Snake.

Pitman (2) p. 94, "is not averse to helping itself to the weaver-birds, both adult and juvenile, which build their nesting colonies in its habitat." But its diet is almost exclusively restricted to cold-blooded prey, and of the hundreds of stomachs he has examined to find bird remains was a rare occurrence. In fact, this is one of the snakes which birds do not appear to recognize as an enemy.

R. E. Symons (*in litt.*) from Natal says that the "green tree snake definitely preys on birds." As he also specifically mentions *Dispholidus typus* (which is a green tree snake) and the green mamba in his communication, this reference must be to *Philothamnus irregularis*.

(e) *Pseudaspis cana*, Mole Snake.

Rose (17) p. 265: "will eat eggs, a large specimen being able to cope with an ordinary fowl's egg which it swallows whole"; and (18) p. 87: "are fond of eggs, of fowls as well as of cobras."

Back-fanged

(f) *Telescopus dhara* (= *obtus*), Large-eyed Snake.

Corkill (8) p. 19, records finding two sparrow nestlings in the stomach of a specimen which was being mobbed by a number of sparrows on a wall 30 feet above the ground; also (*in litt.*) that this species preys very commonly on sparrows.

(g) *Telescopus semiannulatus*, African Tiger Snake.

Pitman (2) p. 133, records finding the remains of a small bird in a Northern Rhodesia specimen.

Ionides (*in litt.*) found an adult *Hirundo* sp. in a Tanganyika tiger snake.

Rose (17) p. 280: "seizes roosting birds, holding them until the venom takes effect"; also (18) p. 114, says the tiger snake is nocturnal feeding mainly on geckos and other lizards "but will seize roosting birds."

Colley, writing from Tanganyika, records finding one of these snakes in a bird cage having swallowed an adult dioch (*Quelea*).

(h) *Crotaphopeltis hotamboeia*, White-lipped Snake (also known as Red-lipped or Herald Snake). Mr. H. M. Millar (*in litt.*) tells how in South Africa he killed a red-lipped snake which had swallowed the two nestlings from the nest of a Paradise Flycatcher (*Tchitrea*).

(i) *Psammophylax* (lately *Trimerorhinus*) *tritaeniat*us, White-bellied Grass Snake or Striped Schaapstekker (of South Africa).

Bogert (19) p. 78, records a Tanganyika specimen "contained a recently hatched bird of a small species."

"(j) *Rhamphiophis oxyrhynchus rostratus*, Eastern Brown Beaked Snake.

Colley, from Tanganyika, records finding one of these snakes, about three feet in length, at a dioch (*Quelea*) nesting site with four young diochs in its stomach."

(k) *Psammophis sibilans*, Hissing Sand Snake.

Cansdale (1) p. 32, states birds are included in the diet of sand snakes.

Corkill (3) p. 21, records a specimen which had "an unidentified bird in its mouth."

Loveridge (13) p. 274, "bird quills in stomach of an Nchisi (Nyasaland) reptile", and (23) p. 39, "occasionally birds" referring to Fleck's (1894) record of a tit, *Parus afer* being taken. There is, however, an abundance of evidence that the sand snake is not normally a bird eater, and the few instances known to the contrary are exceptions. The sand snake, which may attain a length in excess of five feet, is one of the species which birds do not regard as an enemy, and it can often be seen basking on the tops of bushes in the vicinity of weaver and bishop colonies and other birds' nests without being molested.

(l) *Psammophis subtaeniat*us, Stripe-bellied Sand Snake.

Pitman (2) p. 157, includes birds in its diet.

Loveridge (23) p. 53, recalls an incident where a stripe-bellied sand-snake was apparently lying in wait for small waxbills (*Lagonosticta*). In captivity it will take small birds.

General

The Director of the Gold Coast (as it then was) Fisheries Department (*in litt.*): "The only case I have seen of a snake taking a bird was on the

River Dhensu, near Accra. A snake, which I did not identify, seized a well-grown pied crow (*Corvus albus*) in a tree overhanging the river and both fell struggling in the water. The snake lost the bird." The snake was probably either *Dispholidus typus* or *Dendroaspis viridis*.

Sir Charles Belcher (*in litt.*) in Kenya, saw a snake enter the nest of a weaver *Xanthophilus xanthops*, which he had just examined and which contained young, sited at the tip of a very high slender, bamboo-like reed. By the time he got back to the nest the snake had disappeared and so had the nestlings.

Stubbs (*in litt.*) describes how, when he was in the Southern Sudan, on several occasions one of his brooding ducks or hens was found dead in the morning, with their eggs missing and obvious snake tracks to be seen. The predator was almost certainly a cobra.

In India, on the stony scrub-covered hillsides of the north-west frontier, the writer — before he was interested in snakes — on several occasions disturbed colubrids in the act of seizing nestlings.

Isemonger (²⁶) p. 53, after 25 years of constant study of snakes in their wild state emphasizes how rarely — he cites four cases only — does one get the opportunity of witnessing a snake preying on birds. All field herpetologists will certainly agree. There is a general paucity of records of such predations which are probably not infrequent.

LIZARDS

Lizards as predators of birds, and their eggs, have already been partially dealt with *vide Varanus niloticus* *ibid.* 77 (8), a species which constitutes the principal lizard threat. In addition, there is (a) the Land Monitor, *Varanus exanthematicus*; (b) the larger Agamas; and (c) the Giant One-horned Chameleon, *Chamaeleo melleri*.

(a) *Varanus exanthematicus*. Little definite is known of the diet in the wild state of this relatively rare species, but it will, like *Varanus niloticus*, presumably prey on birds and their eggs as opportunity offers. In Afrikaans *Varanus* lizards are called 'leguuan.'

Rose (¹⁷) p. 196, quoting from a correspondent: "*V. albigularis* (= *exanthematicus*) in Damaraland . . . In the spring one can often see it in a tree at the side of a mistletoe in flower, waiting for sunbirds and bulbuls, which it sweeps into its mouth with its tail when they come to suck the nectar from the flowers. The leguuan has endless patience and will remain immovable for days at a good stand until a bird appears" (Bradfield). This note is from a reliable observer and provides an interesting account of an aspect of the Land Monitor's feeding behaviour, though one is inclined to doubt the veracity of the statement "sweeps into its mouth." The action of tail and mouth no doubt are simultaneous.

(b) *Agamas*. The large, wide-gaped agamas, *Agama agama* (the ♂ with conspicuous orange head and tail) and *Agama cyanogaster*, formerly *atricollis* (the ♂ with bright blue head and tail) are sometimes mobbed by passerines, which suggests that they may occasionally be predacious on birds.

Cawkell (²⁷) p. 686, seems to provide the only published record — an incident at Brikama, in Gambia, where he saw a ♂ *Agama agama*, about

ten inches long, run off with a Senegal Fire-finch, *Lagonosticta senegala*.

(c) *Chamaeleo melleri*. This enormous chameleon, with an overall length of almost two feet, is capable of engulfing small birds of waxbill size in its huge mouth.

Loveridge⁽¹³⁾ pp. 188-9 and plate 2 (fig. 1), has an extraordinary photograph taken by Mr. J. R. Lennon, in Nyasaland, of *C. melleri* with a Cordon Bleu, *Uraeginthus bengalus* in its mouth. Lennon also had a photo of a Senegal Waxbill, *Lagonosticta rendalli* being swallowed head first by one of these chameleons. The birds were not seized by the mouth, but were caught by the normal chameleon procedure of shooting out the long, glutinous tongue. Lennon's decease has prevented fuller details being obtained.

I am greatly indebted to all those who have so generously provided me with information based on their own experiences, or who have drawn my attention to relevant references.

SUMMARY

The larger arboreal snakes, as listed, and including all mambas, are habitual bird predators; mambas, *Dispholidus typus* and *Boiga blandingii* can be ruthless raiders of weaver colonies.

Cobras to a certain extent will prey on birds, but the three best known and most widely distributed African species exhibit a distinct liking for eggs — preferably fowls' eggs when they can get them. Too little is known about the ringhals to express an opinion.

The large *Bitis* vipers are not normally bird-eaters.

The horned desert viper *Cerastes* habitually preys on birds, as also does the sand boa, *Eryx colubrinus*. Their semi-burrowing habits enable them to await their prey undetected.

The egg-eater *Dasypeltis* is unique in feeding exclusively on birds' eggs — and only if fresh.

Pythons will feed on birds at almost any age.

Of the twelve "Others" listed — *Boaedon fuliginosus*, *Philothamnus irregularis*, *Pseudaspis cana*, *Crotaphopeltis hotamboeia*, *Rhamphiophis oxyrhynchus rostratus*, and *Psammophis sibilans* do not normally prey on birds. In the cases of *Psammophylax tritaeniatu*s and *Psammophis subtaeniatu*s not enough is known to express an opinion. With reference to *Coluber florulentus*, *Spalerosophis diadema*, *Telescopus dhara* and *Telescopus semiannulatus*, it is likely that birds constitute a normal item in their diet.

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A New Race of the Desert Lark from Egypt

by DR. L. HORVÁTH

Received 12th March, 1958

Ammomanes deserti borosi subsp. nov.

Description: A conspicuously greybacked Desert Lark, not brown-grey, like the nominate form. Whole upper-parts, including scapulars and all

the wing-coverts, light mouse-grey, without any trace of yellowish-brown grey colour. It is very distinct from the series of the nominate form collected by myself at Asswan and the series of *A. d. isabellina* Temminck I have collected between Suez and Cairo. Reddish-brown fringes to primaries and tail-feathers are darker and duller in a great extent, not yellowish, like the nominate form. Under-parts are the same as in the nominate form. Bill is deeper especially the lower mandible; it on the whole is more curved than in



ssp. n.



isabellina



deserti

Bills of Desert Larks

the nominate or *isabellina* forms, especially the tip of the upper mandible. It is interesting to note that the distance between the tip and the junction of the two halves of the lower jaw is 1-2 mm. shorter than in *Ammomanes deserti deserti* or *A. d. isabellina*. (See figures).

Distribution: Only known from the agriculturally cultivated oasis, Bir Abbad, in the Arab Desert 20 kilometers from the Nile about on the 25° N. latitude, Egypt.

Type: In the Hungarian National Museum of Natural History, register number 58.150.1. An adult female collected on an oasis, Bir Abbad, in

the Arab Desert 20 kilometers east from the Nile about on the 25° N., Egypt, by Dr. L. Horváth, on 29th October, 1957. The type locality is 25° 02' N., 33° 04' E. Measurements: wing, 106 mm.; tail, 68 mm.; tarsus, 24 mm.; bill from skull, 13 mm.

Remarks: The deeper and more curved, that is, stronger bill and the grey colour of the upper-parts refer to the effects of its environment. The soil of its habitat is more solid and the colour of the oozy soil of the oasis where it lives is grey.

I have pleasure in naming this new Desert Lark *Ammomanes deserti borosi* in honour of Dr. I. Boros, herpetologist, Chief-Director of the Hungarian National Museum in recognition of his kindness to appointing me as a member of the Museum's first expedition to Africa.

Two New Races of Larks from the Bechuanaland Protectorate

by MISS MARY L. PATERSON

Received 4th April, 1958

Certhilauda albofasciata bathoeni: New race

Discription: Compared with *C. a. kalahariae* O. -Grant, overall more rufous, the edges of feathers of the back, the secondaries and wing coverts buffy, not greyish white. The breast and belly deeper rufous, the ear coverts darker, the dark centres of the feathers of the back less distinct, merging more into the general rufous colour. Much lighter in all above respects than *C. a. baddleyi* from Kanye.

Type: An adult male N.M.31035 from 57 miles east of Kakia, B.P. 24°16'S: 23°24'E. C. S. Barlow, 1957 Expedition. 15.6.57. Taken on open burnt grassland on red kalahari sand. Gonads enlarged, coming up to breed.

Measurements: A series of 6 males and 8 females. Males W.88-94. Av. 91.7; Females W. 81-84 Av. 82.8.

Distribution: Only so far known from a belt of open grassland from some 50 to 75 miles east of Kakia on the Kanye road merging into *kalahariae* westwards between Kakia and 50 miles east of Kakia, there being a break in distribution eastwards owing to a wide belt of unsuitable country west of Kanye where on suitable ground *C. a. baddleyi* occurs. There are also two specimens in the British Museum (Natural History) collected on grassland, 32 miles north of Fort Rietfontein which agree with topotypical *C. a. bathoeni* whereas the "Pan" birds from Fort Rietfontein are *C. a. kalahariae*. Mrs. B. P. Hall of the British Museum (Natural History) who kindly examined these birds for me suggests that the range of *C. a. bathoeni* is probably fairly wide in the Kalahari where suitable grasslands are found and that it is ecologically but not necessarily geographically separated from the "Pan" race.

Unlike *C. a. kalahariae* which was closely associated with the salty pans characteristic of the area west of Kakia, this race occurred in the more open patches of grassland with grass up to 3ft. high.

Remarks: Named after the Paramount Chief of the Banwaketse, Bathoen II, O.B.E., who kindly granted permission for the expedition to operate in his Territory.

My thanks are due to Mr. R. Smithers and Mrs. B. P. Hall for their help and advice.

Calandrella cinerea millardi: New race.

Description: By far the palest of all the races of *C. cinerea* characterised by great loss of red pigment. In this race the upper parts have an over-all greyish appearance compared with *C. c. spleniata* which is in comparison buffy. The centres of the feathers of the upper parts, ashy brown, the feather edges grey with only a very faint trace of buff. The crown, sides of breast and upper tail coverts rufous with grey edges to the feathers giving a general greyer appearance as compared to the darker rufous in all other races.

The basic rufous colour of the crown of *C. c. spleniata* corresponding to Villalobos Colour Atlas OOS 11°9. In this new race corresponding to OOS 7°13.

Type: Adult female N.M.31095 from Chawe pan, 10 miles north east of Tsane, Bechuanaland Protectorate. C. S. Barlow, 1957 expedition 5.6.57. Wing 88, tail 62, culmen 14, in fresh plumage.

Measurements: A series of 12 males and 12 females; Males W. 90-97 Av. 93.5; Females W. 86-90 Av. 88.7.

Distribution: The south west Kalahari from Tsabong, Tsane, Kukong as far west as Kakia on open short grassy pans on calcareous ground. Also recorded from Mumpswe on the northern edge of the Makarikari Pan, normally in parties on similar ground.

Remarks: Specimens taken at Mumpswe in January, 1957 were in parties with *C. c. anderssoni*. As yet we have no evidence as to either of these races being resident in the Mumpswe area, as this species is known to exhibit considerable local movement.

M. P. Stuart Irwin reports that during a visit to Mumpswe in October during the early part of the visit no Red-cap Larks were seen but quite suddenly large numbers of *C. c. anderssoni* appeared ; during this visit no paler specimens were observed in the area. Neither of these races have been found breeding in the Mumpswe area; all specimens being in non-breeding condition.

Named after Mr. John Millard, O.B.E., Divisional Commissioner (Northern Province) Bechuanaland Protectorate, who has assisted us in providing facilities for our work in the B.P.

My thanks are due to Mr. C. M. N. White who has examined a series of *C. c. millardi* and has suggested they be described.

River Warbler in Switzerland

by DR. JAMES M. HARRISON

Received 1st March, 1958

In view of the fact that the River-Warbler, *Locustella fluviatilis* (Wolf) is regarded as of rare, or even doubtful occurrence in Switzerland, the record of an example, a male, which I have in my collection and which was obtained on 3rd August, 1956 at Cossonay, in Canton Vaud is worthy of note.

I received this specimen from the late Ernst Flükiger, of Interlaken and have no reason whatsoever to question its authenticity.

A Description of the Unrecorded Gape and Mouth Markings of the Locust Finch, *Ortygospiza locustella* with some Breeding and Other Notes

by MR. MICHAEL P. STUART IRWIN

Received 21st April, 1958

Though the mouth and palatal markings of the Quail Finch, *Ortygospiza atricollis* have been described by St. Quintin (*Avicultural Mag*, Ser. 3, 1, 1910: 103–104) and by Serle (*Oologists' Rec.* 18, 1938: 61–62), those of the Locust Finch, *Ortygospiza locustella* have remained unknown. The description that follows is from a nestling aged approximately $6\frac{1}{2}$ days from a nest found in late April at Chatsworth in the Midlands of Southern Rhodesia. The nest was visited twice daily from the time of hatching and the mouth and gape pattern had already attained their full development when the description was taken. Unfortunately three out of the four young disappeared on the sixth day, having evidently been removed by a predator and on account of this the remaining nestling was preserved in spirit.

On either side of the gape are two flat red lobes protruding slightly from the corners of the mouth. The palatal pattern consists of two opposing black lines, bow shaped and running along the roof of the mouth at the edge of the palate and all but joining anteriorly. At right angles and at the base of these two lines, are two inverted bow-shaped lines, one on either side of the mouth at a level with the gape wattles, but only about one third the length of those on the palate. Within the opposing palatal lines the roof of the mouth is bright red, the colour extending down into the throat. The tongue has three raised red lobes which overlap its edges. The posterior pair are lozenge-shaped, and placed together along the axis of the tongue and the anterior and somewhat larger one is heart shaped.

In Mashonaland and the Midlands of Southern Rhodesia, the Locust Finch is entirely restricted to moist dambos clothed in short wiry and tufty grass, with a probably preference for water logged sand veld rather than black cotton soil and is everywhere local.

In the Chatsworth area of the Midlands, five nests were found between February and April; situated in dambos running down through light *Brachystegia* woodland, along the edges of which grew the tree *Parinari mobola* and often in or near the centres a few *Syzygium guineense*. In the same area the Quail Finch *Ortygospiza atricollis* also nested commonly, but invariably in drier situations where the grass was more even and less tufty, though nesting sites may become temporarily waterlogged after heavy rain. *O. atricollis* never however, builds in quite the moist situations favoured by *O. locustella*.

Nest construction agreed with the description given by Vincent (*Ibis*, 91, 1949: 662–663). All five nests examined, and a sixth deserted and empty, had linings of short stripped grass stalks, the remainder of the nest being composed of dead grass. Judging by the state of incubation of different clutches this ornamental lining of grass is used when green and apparently added to during the earlier states of incubation. In four out of five nests, a few feathers were present and in the fifth some plant down.

Although Vincent (*loc. cit.*) collected a male *O. atricollis* supposedly

incubating, in *O. locustella*, the greater part of the duties would appear to be undertaken by the female, though positive observation was difficult and was confined to observing the sex of the bird flushed. During the day females could be flushed from the nests, in some cases accompanied by the male. Males always repaired to the nests about half an hour before sunset and roosted therein throughout the night. In the one nest observed that contained young, the female appeared to take the greater part of the responsibility in feeding. Both, however, appeared to feed together when off the nest after the young have hatched and probably so during incubation.

Incubation would appear to begin before the completion of the clutch. A nest of C/7 showed a difference of between 3 to 4 days in the development of the embryos, in two C/6, the disparity was about 48 hours in one case, but not noticeable in another; the four young already mentioned, all hatched within 12 hours. Neuby-Varty (in Rhodesian Ornithological Society Nest Record Card Scheme), gives details of a clutch of C/8 from the Marandellas district, all in different stages of incubation and indicative of having commenced with the first or second egg. There is the possibility that incubation may start earlier in larger clutches.

Clutch size is considerably higher than published information indicates, data for Southern Rhodesian clutches being as follows: 1 x C/8, 3 x C/7, 4 x C/6, 1 x C/5, 2 x C/4, C/2, the last almost certainly incomplete.

Chapin (*Birds of the Belgian Congo* 1954: 503), on limited material merged the race *irisa* Roberts, (*Ann. Transv. Mus.* 15, 1932: 33), with the monimate one, this action is fully born out by the sixteen adult specimens now available from Southern Rhodesia when compared with nineteen from Northern Rhodesia.

Smithers, Irwin and Paterson (*Check List of the Birds of Southern Rhodesia* 1957: 154), regarded the species as an intra-tropical migrant appearing only during favourable years. Recent evidence seems to point to its being a resident with some local movement. J. Ross Peters (*in litt.*), is convinced that the species remains throughout the year in the Rusape district, recording it between October and June and during July at Timaru on the Rusape-Inyanga road at 6,000 feet. A movement at Rusape, causing their temporary disappearance seems to co-incide with the drying up of suitable moist grassland. B. V. Neuby-Varty (*in litt.*), records small flocks in the Marandellas area throughout the dry season, with a flock of c.20 birds in August–September. On the Umvukwes Ranch, in the Banket district, the same correspondent records enormous variation in numbers from year to year independent of the average rainfall.

Despite intensive collecting and field work commencing in 1950, the author did not encounter the species until the 1955–56 rainy season, at the same time R. W. Rankine and J. Ross Peters also first came upon it in the Headlands and Rusape districts. There is a distinct possibility that this and other moist grassland species such as the “cloud scraping” grass warblers *Cisticola ayresii* and *Cisticola brunnescens*, may be subject to cyclic fluctuations in numbers associated with changes in their habitat connected with rainfall. Since the 1951–52 rainy season, Southern Rhodesia has experienced a succession of above average rains, that were immediately preceded by a series of drought years. In a period of decreased rainfall, if

severe enough and extending over a number of seasons, as is normally the case, much of the potential available habitat must be rendered unsuitable through the drying up of dambos, this would tend towards a sharp reduction in numbers of such a specialised species and confine it to even more circumscribed areas. There are, therefore, grounds for suggesting that the drought period immediately preceding the 1951–52 rainy season, would have been sufficient to reduce the population to a level when the species became sufficiently sparse and localised to avoid easy and obvious discovery and that a build up in numbers has subsequently occurred during the present period of increased rainfall.

Both the Quail and Locust Finches are completely terrestrial in their mode of life, never even perching on grass stems. In this respect they must be unique among the Estrildine Waxbills and indeed weavers and Passerines in general. It is therefore unfortunate that several standard works illustrate them in a perching position which they never assume in life.

A New Race of the Bunting *Fringillaria capensis* (L.) from Angola

by DR. GUSTAF RUDEBECK

Received 12th April, 1958

The Rock Bunting *Fringillaria capensis* (L.) is widely distributed in South Africa, mainly south of the Cunene and Zambezi Rivers, but in the eastern parts of the continent it extends as far north as Nyasaland and adjoining parts of Portuguese East Africa. Just over a hundred years ago, Hartlaub (1857, p. lvii) included the species in his "Verzeichniss derjenigen Vögel Westafrikas, welche zugleich in Südafrika angetroffen werden," and on p. 152 in the same work there is a quotation ("Angola: Henders.") to the effect that *capensis* occurs in Angola. However, Reichenow (1904–05, iii, p. 288) put this record in brackets, presumably because Barboza du Bocage (1881) did not mention the species at all. According to later authors (e.g., Sclater 1930, p. 830, and Praed & Grant 1955, p. 1094–1095), *Fringillaria capensis* does not occur north of the South West Africa — Angola border.

In August – October, 1956, the present writer was fortunate to take part in the Visser — Transvaal Museum Expedition to Kaokoveld and Southern Angola. On this occasion, three specimens of *Fringillaria capensis* were collected at Lucira in South-western Angola. They belong to a race which is new to science and described herewith.

Fringillaria capensis nebulorum subspecies nova.

Description: (head and neck) feathers at base of culmen white, turning into grey higher up on front. Top of head grey with dark streaks. A dark stripe from nostrils along sides of crown, this stripe being broad and black in front but further backwards merging with the dark — but not pure black — streaks on top of head. Lores white, continuing in a stripe above eye to sides of neck. Another broader stripe below the eyes to lower ear-coverts is also white, as is the chin and the throat. The white areas are separated by a black stripe through the eye and another from base of lower

mandible along the malar region; these stripes joining each other on sides of neck. Rather much grey showing on nape, where the dark shaft-streaks are narrower and partly indistinct. *Back* brown with faint traces of rufous but a considerable suffusion of grey, and with narrow (1 – 2 mm.), dark brown shaft-streaks. Upper rump uniformly olive to greyish brown. (*Wings*) upper wing-coverts rich chestnut, small coverts along edge of wing partly white. Primaries and secondaries uniformly brownish; the former, except the outer-most one, edged pale chestnut to whitish, the latter broadly edged chestnut. Hidden parts of inner webs of wing-feathers are paler. Under wing-coverts grey to whitish. (*Under-parts*) breast grey without admixture of brownish. The colour gradually becomes paler towards belly which is whitish. A slight creamy or buffish tinge is visible on belly and lower tail-coverts, being strongest on lower belly. Tibial feathering grey, tips of feathers often whitish. *Tail* dark and dull brown; very indistinct bars visible at certain angles. Outermost rectrix on outer web edged whitish or pale buff. *Bill* horn, base of lower mandible paler. *Legs and claws* blackish.

Measurements:

<i>Collector's number</i>	<i>Sex</i>	<i>Wing</i>	<i>Tail</i>	<i>Bill</i>		
				<i>fr.s.</i>	<i>fr.f.</i>	<i>fr.n.</i>
134	♂	80.5	63	14.5	13.5	9
135 (<i>type of nebulareum</i>)	♂	81.5	64	15.5	13.5	9.5
136	♂	80	62	15	13.5	10

Explanations to table:

“Bill fr.s.” means length of bill from tip to skull, i.e. to the cranio-facial angle.

“Bill fr.f.” means length of bill from tip to feathers, i.e. length of exposed culmen.

“Bill fr.n.” means length of bill from tip to front edge of nostril.

Type locality: Lucira, S.W. Angola. For description of habitat, see below. Date: 13th September, 1956. G. Rudebeck legit.

The specimens have been compared with the series in the Transvaal Museum, Pretoria, the National Museum of Southern Rhodesia, Bulawayo, and the British Museum (Natural History) in London. I have seen series of all races of *Fringillaria capensis*, except the dark-bellied form *smithersii* Plowes from the Chimanimani Mountains in Southern Rhodesia.

Fringillaria capensis nebulareum comes close to the race *cloosi* Hoesch & Niethammer, which is known only from the Brandberg, S.W. Africa (about 21° 10' S, 14° 40' E). However, *nebulareum* is readily distinguished by its very light under-parts, and its bill is also slightly longer. The race *bradfieldi* Roberts, with type locality Waterberg Police Post, Waterberg, S.W. Africa (about 20° 30' S, 17° 15' E) is a buffish olive colour on belly, quite different from *nebulareum* and considerably darker than *cloosi*. The bill of *bradfieldi*, though long and pointed in comparison with the races farther south, is shorter than in the races mentioned above.

The trend towards a shorter bill, much darker under-parts, and more broadly striped back is continuing through southern South West Africa and western Cape Province. The races *karasensis*, *ausensis* and *klaverensis*, all described by Roberts, have been founded on the populations breeding in these areas. The form *capensis capensis* (Linnaeus) from the “Cape of

Good Hope" is the darkest extreme on this side of the continent. In other words, there is a cline from short-billed and dark birds in the south to long-billed and light ones in the north, the extremes being represented by *capensis* and *nebularum*, respectively.

Fringillaria capensis is a bird of rocks and stony slopes or plateaus, often with scarce and low vegetation. From its habitat requirements it follows that the bird is common in certain parts of its range but absent or very local in many areas. As far as known, the species is resident. Hence certain populations are presumably effectively isolated. It is reasonable to assume that this has played a part in the evolution of the numerous geographical races nowadays recognized. This does not mean, however, that all the races interposed between *capensis* and *bradfieldi* can be upheld. Vincent (1950, 1952) did not accept *klaverensis*, and Macdonald (1957) has given reasons for synonymizing both *klaverensis* and *ausensis* with the nominate form. Nor has the race *cloosi* been generally admitted. Vincent (l. c.) did not mention it at all; and the two specimens from Brandberg which are in the British Museum have been assigned to *bradfieldi*. In the opinion of the present writer, *cloosi* is a valid race. But no doubt some of Roberts's races were described on slender grounds. However this may be, the clinal variation of the characters mentioned above is clear-cut in Western South Africa, even if the cline is not absolutely continuous or of the same "inclination" all the way.

It may be added that the races of *Fringillaria capensis* which breed in the Karoo and north-eastwards from there (Basutoland, Transvaal, Southern Rhodesia, Nyasaland, &c.), do *not* show such a clear-cut clinal variation in the characters referred to.

The race *plowesi* Vincent (type locality: Matopos near Bulawayo, Southern Rhodesia) is surprisingly similar to *nebularum* in colouration but easily separated, even in single specimens, by its much shorter and blunter bill. In a series of 12 males of *plowesi*, the length of the exposed culmen varies from 9.5 to 11.0 mm. (average 10.3 mm.), and the length of bill from nostril is 7 – 8 mm. (average 7.5 mm.). Also, in *plowesi* the colour of the back is sandy brown, often with some admixture of rufous or pale chestnut, and the streaks are broader (2 – 3 mm.), blackish, and sharply contrasting (cf. description of *nebularum* above). The difference in colour is immediately seen in a series but not always in single specimens. The colour on breast and belly is perhaps a trifle paler in *nebularum*.

Lucira, the type locality of the new race, is a small fishing village on the coast of Angola, about 130 miles north of Mossamedes. It is situated on a small beach, squeezed in between cliffs and mountains. Even the coast proper is mainly precipitous, and the mountains reach an estimated height of 300 – 400 metres (ab. 1,000 – 1,300 feet). The landscape is gravelly and very stony, with many steep slopes but also plateau-land with big boulders. The vegetation consist of low herbs and scattered bushes including Euphorbias similar to *E. gregaria* of the Namib Desert of South West Africa (cf. Hoesch & Niethammer 1940, p. 20, fig. 5); but most of the ground is bare. The precipitation is very low, but the mountains are often covered with mist or low-lying clouds. The general type of the country might be described as semi-desert rather than desert.

The specimens of *nebularum* were collected on an undulating plateau

with an abundance of stones and big boulders, about 2 miles inland from the village and at an estimated height of at least 300 metres above sea level.

Acknowledgements: Dr. V. FitzSimons, the Director of the Transvaal Museum, Pretoria, kindly allowed me to take part in the Visser-Transvaal Museum Expedition to the Kaokoveld and Angola. The expedition was sponsored by Mr. G. Visser, Cape Town. My work at the National Museum of Southern Rhodesia in Bulawayo was greatly facilitated by the Director, Mr. R. H. N. Smithers, and Miss Mary Paterson. At the British Museum of Natural History in London Mr. J. D. Macdonald, Senior Scientific Officer, and Mr. Derek Goodwin were most helpful. To all those mentioned above I express my best thanks.

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Distribution of *Eremomela icteropygialis* Lafresnaye

by DR. J. M. WINTERBOTTOM

Received 17th March, 1958

In his "Contribution to the Ornithology of Western South Africa," 1957, p. 136, J. D. Macdonald says of this species:

"The type is in the Museum of Comparative Zoology, Cambridge, Mass., and Mr. J. C. Greenway . . said there is inscribed on its label, in Lafresnaye's handwriting, the words 'des Elephants' which was crossed out and the words 'd'Orange' added. Lafresnaye in his description says, 'said to have come from the Orange River.' It is quite unlikely that the bird was taken on the Olifants River . . . The specimen was probably collected by Levaillant . . ."

Mr. Macdonald does not say why the type is unlikely to have come from the Olifants, except by implication; and there are two possible implications: (a) that it agrees in appearance with a bird from Otjimbingwe and therefore

represents the northern race; (b) that the species does not occur on the Olifants, which his discussion on the previous page seems to suggest. I have no quarrel with (a); but (b) cannot be sustained, as I myself collected an example of *E. icteropygialis* at Doornbaai, a few miles south of the Olifants River mouth, 27th November, 1956. This bird agrees with a series from Hanover, Beaufort West and other karoo localities in the Cape Province, all of which are considered to be *E. i. saturator* O. -Grant, described from Deelfontein.

A New Name for a South African Race of Grey Tit

Parus afer Gmelin

by MR. P. A. CLANCEY

Received 6th August, 1958

In the Ibis, vol. 100, 3, 1958, pp. 452-454, I recognised *Parus afer intermedius* Shelley, 1900: Potchefstroom, Transvaal, as a valid race of Grey Tit ranging throughout the Orange Free State, Basutoland, Natal, Transvaal, and Southern Rhodesia to the south of the range of *Parus afer griseiventris* Reichenow. Unfortunately, *P.a.intermedius*, 1900, is now found to be preoccupied by *Parus major intermedius* Zarudny, 1890, and a new name is required for the race. I propose

Parus afer orphnus, nom. nov.

pro *Parus afer intermedius* Shelley, *Birds of Africa*, vol.ii, 1900, p. 241, NOT *Parus boharensis* var.*intermedius* Zarudny, *Bull.Soc.Imp.Nat. Moscow*, 1890, p. 789.

The Paradise Flycatcher *Terpsiphone viridis* in Northern Rhodesia and Nyasaland

by MR. C. W. BENSON

Received 24th May, 1958

Seventy-six specimens from Northern Rhodesia in the National Museum of Southern Rhodesia, Bulawayo fall into months as follows: January, two; February, three; March, seven; April, two; May, seven; June, six; July, three; August, two; September, nineteen; October, thirteen; November, seven; December, five. Mr. R. H. N. Smithers has drawn my attention to those collected in June and July, all of which may in fact be *Terpsiphone v. granti* (Roberts), Bull. Brit. Orn. Cl. 68, 1948: 129, the name to be used in place of *T. v. perspicillata* (Swainson). This form was overlooked by Benson & White, "Check List of the Birds of Northern Rhodesia", 1957. While all the specimens collected in the other months appear to be *T. v. plumbeiceps* Reichenow, four males and three females collected in June and July are quite easily distinguishable in having the crown markedly more glossy, and green rather than violaceous grey in sheen. In the males the chin and throat are also glossy, but there is no trace of this in any specimen of *T. v. plumbeiceps*. Two other specimens

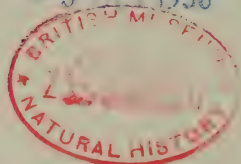
are apparently immature, and indeterminate, though presumably also *T. v. granti*. These nine specimens are all either from the Luangwa River in the Mpika District, or its tributaries therein, the Munyamadzi and the Mutinondo, or from Museshya, Mweru Marsh, except that one of the immatures is from Kasama. *T. v. perspicillata* is recorded by Smithers *et al.*, "Check List of the Birds of Southern Rhodesia", 1957, from the Sabi-Lundi junction. This is based on three specimens collected in June, agreeing well in colour with those from Northern Rhodesia. Mrs. B. P. Hall has kindly supplied the following particulars of specimens of *T. v. granti*, all males, all apparently from Rhodesia and Nyasaland, in the British Museum: Kachere, Nyasaland, 8,400 ft., November, 1902, Alfred Sharpe; Malosa, Nyasaland, May, 1902, Alfred Sharpe; immature, Charamba, Zambesi River, 1st August, 1898, Boyd Alexander; immature, no date, "Zambesi", Kirk. It is best to discount the record from Kachere 8,400 ft. The specimen may well have been mislabelled, as I know from experience has occurred with some others of Sharpe's specimens. Kachere is evidently on the Nyika Plateau, see Benson, "Check List of the Birds of Nyasaland", 1953: 91, and it is unlikely that the species would occur so high, or this particular race in November.

It may be noted that McLachlan & Liversidge, "Birds of South Africa", 1957, record *T. v. perspicillata* from the Cape only from October to March, and state that there are only occasional winter records from the Albany district and Natal. Benson, *op. cit.* did not list this form, thinking (mistakenly) that specimens from Nyasaland with the coloration thereof were merely aberrant individuals of *T. v. plumbeiceps* or *T. v. violacea* Grant & Mackworth-Praed (if recognisable). Breeding records of *T. v. granti* from Nyasaland, see Mackworth-Praed & Grant, "Birds of Eastern and North Eastern Africa" 2, 1955: 223, are not understood. Chapin, "Birds of the Belgian Congo" 3, 1953: 716, records that *T. v. plumbeiceps* wanders in the off season northward to the Cameroon and northern Congo. It would appear that *T. v. granti* "winters" mainly in Central Africa, more especially at low levels, but further data are of course required.

I must thank Mr. Smithers for the loan of specimens, and Major I. R. Grimwood for examining them with me.

PURCHASED

- 3 OCT 1958



Notices

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Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1958

21st October, 18th November, 16th December.

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BLACK AND WHITE ILLUSTRATIONS

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Communications are not restricted to members of the British Ornithologists' Club, and contributions on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

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The five hundred and sixty-seventh meeting of the Club was held at the Rembrandt Hotel, S.W.7, on Tuesday, 21st October, 1958, following a dinner at 6.30 p.m.

Chairman: MR. C. W. MACWORTH-PRAED.

Members present, 32; Guests, 12; Guests of the Club, 2; Total: 46.

Birds, Beasts and Butterflies of Equatorial Africa

Mrs. Iris Darnton showed a colour film on the above subject and sent the following summary:—

The film opens in the Belgian Congo with various roadside scenes, a colourful native market, and the great rivers of lava which have flowed over the years from a still active volcano, into the waters of Lake Kivu.

At Kisenyi, the resident, M. Weber, kindly arranged a Watutsi dance for us to photograph. After a few days spent in the Parc Roi Albert, we revisited the Queen Elizabeth Park in Uganda, and could not resist taking some further pictures of the many water birds which frequent the shores of Lake Edward.

We then drove on to Kenya where we stayed in the various reserves, including the Marsabit in the Northern Province. Here we found the Uaso N-yero in flood, our car fell into a flooded donga and we were marooned in camp with only one tin of soup left and one ounce of cheese!

However we managed to film some birds and beasts in spite of the weather.

Review

Ornithological Nomenclature

When Captain C. H. B. Grant died last winter he left a mass of notes on the subject to which he was so devoted. These have now been privately printed by some of his friends under the title: "Ornithological Nomenclature and Nomenclatorial Procedure." In this little book Captain Grant gives the answer to practically every question that can arise in scientific

denomination. An ardent champion of "Priority" he sometimes found himself in disagreement with the rulings of the International Commission on Zoological Nomenclature, but he has not put forward any new ideas before this and we now have in this publication a *vade-mecum* and guide to good order and discipline in future taxonomy.

It is hoped that it may be adopted and reprinted by some learned society so that all ornithologists—and indeed all zoologists—may have the benefit of the accumulated wisdom of one of the greatest taxonomists of his generation. — W.P.C.T.

The existence and causation of colour-preferences in the pairing of Feral and Domestic Pigeons

by MR. DEREK GOODWIN

Received 1st June, 1958

Throughout my boyhood and youth I kept Domestic Pigeons (*Columba livia*) and also spent much time observing those belonging to other people and the Feral Pigeons in towns. I early observed that most individual pigeons were more strongly attracted to pigeons of a certain colour or colours than to others but did not pay any particular attention to this fact. When I began to keep a few pigeons again in 1952 I thought more about this and realised that in the few instances where I could remember both a pigeons' sexual preferences and its parents' colouration there was a positive correlation between the two. I thereupon kept a careful record of some individual pigeons from infancy onwards. Their case histories follow:

(1) A barred ice-blue (pale silver grey with Rock Pigeon markings) male was reared by his own parents, a silver (pale creamy fawn with dun wing bars) cock and a barless ice-blue hen until 20 days old. He and his sister—a silver—were then removed and fed by hand together with two young female Rock Pigeons a few days younger than themselves. The parents frequently visited all four young, however, and, on some occasions at least, managed to feed some or all of them. When he became sexually active this ice-blue male was most strongly attracted to silver pigeons and very slightly less so to ice-blues. Only by keeping him out of sight of silver and ice-blue hen pigeons was he induced to show sexual interest in the hen Rock Pigeons, and then he soon paired to one of them. For several weeks after this took place, however, he would leave his mate at once to court any silver or ice-blue hen pigeon that came near. Later, however, no doubt through habituation, he came to react as strongly sexually towards blue (Rock Pigeon colour) hen pigeons and to display as intensely to them as he did to silver and ice-blue specimens.

(2) A blue (Rock Pigeon colour) male was reared (no nest mate) by his own parents, a blue hen and a grey grizzle cock. When sexually mature he was very strongly attracted to his own mother and the two hen Rock Pigeons but showed only slight sexual interest in silver, ice-blue and dark blue chequer hen pigeons. I had no grizzle hens so cannot say whether, as is likely, he would have shown a strong response to them also. He courted the unpaired hen Rock Pigeon for over two months in spite of her lack of reciprocation, at the end of which time she accepted him.

(3) Two young female Rock Pigeons were taken from a wild nest when about 18 days old. They were hand-reared in company with two young domestic pigeons, an ice-blue male (see above) and a silver female. They were also frequently visited, and, probably, on some occasions fed, by an adult silver cock and a barless ice-blue hen. When sexually mature both fell "in love" with and made sexual advances to the ice-blue male with which they had been reared. The loser took over two months before she (apparently) became reconciled to fate and accepted the blue male (a bird just as active and highly-sexed as the ice-blue) who had been persistently courting her throughout all this time. Even after pairing, however, she sometimes enticed the ice-blue cock (who, it must be remarked, did not need much enticing) to copulate with her. Since both her mate and her sister were well aware of her feelings towards the ice-blue cock she did not—so far as I was able to observe—get many opportunities to be "unfaithful", but she made the most of such as did present themselves. It is interesting that although this bird had been reared by her own wild parents to the age of about 18 days, she was more attracted to the ice-blue than to a pigeon of the natural wild colour. This suggests that the conditioning for such preferences probably takes place in the later fledgling stage and/or in the early days after leaving the nest. In this species, where the nest is often in semi-darkness, one would indeed expect this, but I think it probably holds good for other pigeons as well and, of course, hole-nesting is neither a primitive or widespread habit in the *Columbidae*. It is at anyrate known that there are several instances of wild pigeons of branch nesting species becoming sexually and socially fixated on other species with which they have not been associated with until at and after fledging.

(4) A male grey grizzle was reared by his own parents, a white grizzle cock and a blue hen. His parents were given dummy eggs when they nested again. Hence they tolerated the young bird's presence for a much longer time than they would otherwise have done. Before he was sexually mature his father was lost. His first sexual displays were directed at his mother. She at once responded to them and they paired. Although a very lively and highly sexed bird he very seldom displayed to other hen pigeons (as most cock pigeons habitually do) and when he did so it was usually to one or other of the wild Rock Pigeons, who although a little paler and with much less iridescence on the neck, were otherwise very like his mate and much more like her than any of my other hen pigeons. He showed some sexual attraction towards a young male of the same colour as his mate (one of his own sons) but as, unlike many young male pigeons, this bird had no bisexual tendencies, he met with only negative response and soon lost interest in it.

To try to find out whether any such mating preferences obtained among larger populations not directly under human control I kept a note of all established pairs of Feral Pigeons seen between December 1956 and June 1957. Most of these were in inner London, but a few in Scotland, Yorkshire and Bristol. The criteria used to ensure that only birds truly paired to each other were included were that either the cock must be seen driving the hen or cock and hen be seen co-operating in nesting or parental duties. To minimise the risk of pairs being counted twice no second count was taken in any street, square or field in which only a few individuals were present.

In such places as Trafalgar Square and Regents Park counts were made at different times of day and not more than thrice in any one month. If one of the many pairs that I could recognize individually and had already counted were present no count was taken on that occasion.

Of 732 pairs the majority of birds of both sexes were "blue" in colour and either barred, chequered or "velvet" in pattern. Dull black birds were numerous. There was a minority of "dominant red" birds with the same patterns (see Goodwin 1957) as in blues and a rather larger minority which showed some degree of albinism. Of these, those with much white in their plumage and at least half the head white I termed "pieds" and those with white only on primaries, belly or tail and with little or no white on the head I termed "white-flights". This does not quite correspond to the conventional pigeon-fancier's usage of these terms but I wished to distinguish between those pigeons which appeared largely white to the human (and presumably also avian) eye and those which did not. In particular all birds that I classed as "pieds" showed a considerable amount of white when viewed face to face, as a pigeon is seen by the bird it displays to or the fledgling it feeds.

As the accompanying table shows there was evidence of a strong tendency for pied and red pigeons to be paired to mates similarly coloured. There was no tendency for blue pigeons to be paired to birds of the same pattern rather than to others of lighter or darker pattern and there was no tendency for the bluish black specimens to pair with each other rather than with blues.

Two mechanisms could be responsible, either jointly or separately, for such relatively selective pairing. Firstly if most or many young pigeons tend to remain in or near their birth-place there would be an increased likelihood of their pairing with relatives, many of whom would be similarly coloured. Unlike some birds Rock and Domestic Pigeons have no inhibitions against pairing with individuals that have been personally known to them since infancy. Secondly, imprinting on their parents and/or nest mate might cause pigeons to prefer mates of the same colour as these. The case-histories given show that this can be a decisive factor and it is highly probable that it also operates among feral birds living an entirely uncontrolled life. It must be remembered in this connection that many red or pied feral Pigeons will have had one blue or black parent, some blue individuals will have had one red parent and blue females may have had two red parents. The fact that, for example, a blue and a red pigeon are paired together does not therefore necessarily prove that each has—either from choice or necessity—paired to a partner coloured differently from both its own parents.

Such conditioned sexual preferences have probably played an important part in helping to propagate new colour-varieties in the early days of pigeon-breeding. At least many of the older European breeds—such as the various "clean-legged" German Toys—were at one time expected to find their own food in the fields and were not subjected to the close confinement and highly artificial conditions that are the lot of most fancy pigeons today. Under such circumstances a sexual preference for birds similar to their own parents would have tended to minimise pairing and casual flirtation with the many blue Dovecote Pigeons that they must have

associated with on the feeding grounds. In parts of Egypt there is very little, if any, interbreeding between the Rock and Dovecote Pigeons on one hand and the (usually) much larger pied, white or red Domestic Pigeons.

Among wild species we find several instances of sympatric and closely related species which differ strikingly in the colouration of the head and/or display plumage but are otherwise very similarly coloured. For example the Snow Pigeon (*Columba leuconata*) and the Blue Hill Pigeon (*Columba rupestris*), and the White-crowned and Red-necked Pigeons (*C. leucocephala* and *C. squamosa*). In such wild species the plumage differences are reinforced by differences of voice and/or ecology but the above observations on *C. livia* suggest that the colour differences have been one of the important factors in the speciation of such wild forms.

Colours	♂♂	♀♀	Pairs
Blue	558	555	438
Black	64	57	9
Red	45	27	19
Pied	20	28	8
White/Flight	39	55	5
Grizzle	6	8	Nil
Other Colours	Nil	2	Nil

A Wood Pigeon with an unusual call

by MR. DEREK GOODWIN

Received, 18th June, 1958

One morning in March 1958 I heard a pigeon call which I could not identify from an unseen bird somewhere on the roofs near my flat in South Kensington. Each cooing phrase consisted of three notes and I thought at first the bird responsible must be a Collared Dove, *Streptopelia decaocto*. After hearing several repetitions of the call, however, it did not "seem quite right" for the Collard Dove in tone, although in rhythm and duration it was very like the latter's "Côô-coo-côôk", and decided that a Wood Pigeon *Columba palumbus* with an aberrant advertising-call must be responsible. Such proved to be the case and a few days later I had very good views of the bird—a typical male Wood Pigeon—as it called from a perch quite near my window. Whether this individual ever used the normal advertising call of the Wood Pigeon, I do not know but think not in view of the frequency with which he uttered his unusual three-note variant. I continued to hear this bird daily until I moved to a new address late in May.

The call of this individual would appear to have been somewhat similar

to that of Iraqi Wood Pigeons (Harrison 1955) but it differed from the latter in that the individual notes were similar in tone to those of a normal Wood Pigeon and not more highly pitched, as in the Iraqi birds. Also the final note of the three-note phrase of this bird was not more abrupt, and struck me as being rather less so, than the final "côôk" of a normal Wood Pigeon's "song".

Reference:

Harrison, Jeffery G. "The Call-Note of Iraqi Wood Pigeons" Bulletin B.O.C. Vol. 75, pp. 69-70, 1955.

Taxonomic Notes on the Ploceidae

by MR. C. M. N. WHITE AND MR. R. E. MOREAU

Received 18th April, 1958

INTRODUCTION

These notes have been prepared in connection with our draft of the Ploceidae section of "Peters' Check List of the Birds of the World", which we have undertaken at the request of the general editors. The present notes are intended to cover chiefly points of nomenclature, subspecific recognition or range, over which we differ from Sclater (1930) or from the later sub-regional works, especially Bannerman (1949, 1951) and Mackworth-Praed & Grant (1955). But we have not felt it necessary to document those numerous cases where it is now possible to define the ranges more exactly as a result of the publication of recent authoritative lists, especially by Cave & Macdonald (1955), Benson & White (1957), Smithers *et al.* (1957), McLachlan & Liversidge (1957) and Schouteden in press.

Authorities for names are omitted when they are already given in Sclater (1930). The problem of the classification of the Ploceinae section of the Ploceidae is being discussed elsewhere.

The sub-families.

The Estrildinae are now excluded from the Ploceidae, following the acceptance by Mayr & Greenway (1956) of Steiner's (1955) arguments for raising the estrildines to family rank.

The question of how many sub-families are to be recognized in the remaining Ploceidae is a difficult one. We are not aware that any fresh evidence has become available since that marshalled by Sushkin (1927). Information on the behaviour of the Ploceidae is still most imperfect. Most authors have followed Sushkin in recognizing the following sub-families in addition to the large one of the Ploceinae:

Bubalornithinae. Two monotypic genera, of which only one, the nominate, has the unique anatomical character of the pseudo-penis (figured by Sushkin)*.

Plocepasserinae. Four small genera, two of them monotypic.

Passerinae. The sparrows and "rock-sparrows" (see below).

Sporopipinae. One genus of two species.

Sushkin himself reached his conclusions with some hesitation. He

*Bannerman (1949) writes of this as "an external copulatory organ or penis", as if it were a functional organ, but Sushkin describes it as imperforate. So does Hartert, 1917, Bull. Brit. Orn. Cl. 37: 51.

regarded the Plocepasserinae as intermediate between the Passerinae and the most primitive group of the family, the Bupalornithinae, while he placed the two species comprising the Sporopipinae between the Bupalornithinae and the Estrildinae. This last view has been compromised by the removal of the Estrildinae to form a separate family. Meanwhile Mayr & Amadon (1951) have thought it "unnecessary" to recognize sub-families for the Plocepasserinae and the Sporopipinae, which they would unite with the Passerinae and the Ploceinae respectively. Of these two proceedings, that which unites the Sporopipinae with the Ploceinae is the less readily acceptable, since the birds strike us in the field as so unlike; but on the other hand the reasons given by Sushkin for erecting the two *Sporopipes* spp. into a sub-family are, as Mayr remarks (*in litt.*) not particularly cogent. Provisionally then, and pending further studies of *Sporopipes*, especially in the field, we include it in the Ploceinae.

1. The *Passer griseus-diffusus* group of African sparrows

Opinion has varied on the taxonomic treatment of this group of sparrows. Lynes (1926) and Sclater (1930) recognized two species, *griseus* occupying most of the Ethiopian Region, and *gongonensis* confined to a part of East Africa. Grant & Mackworth-Praed (1944, 1947) regarded *suahelicus* and *swainsonii* also as distinct species, as well as by inference *diffusus*. We have re-examined the whole group, with the help of specimens lent by the Berlin Museum, the American Museum of Natural History, the Stockholm Museum and the Carnegie Museum of Pittsburgh, to all of whom our thanks are due.

We find that most of the well-marked types of variation are allopatric, with intergradation between them, suggesting only a single species, but in at least two areas, coastal Angola and the Luangwa Valley of Northern Rhodesia, two distinct forms do occur together. To meet the requirements of the conventional check list, it is necessary to decide how the situation can best be dealt with within the framework of current taxonomy, and the discussion that follows has that object.

It may be stressed at the outset that the differences between the five species recognized by Grant & Mackworth-Praed are of degree rather than of kind, for example, in the amount of contrast between head-colour and back-colour, in "warmth" or "coldness" of brown, or in size of beak.

It might perhaps have been supposed that habitat preferences would be a useful guide to relationships, but this can hardly be regarded as reliable since the preferences of the same form (*swainsonii*) change within so small an area as Eritrea (Smith 1957)—and there is always the example of the Tree Sparrow, *P. montanus*, a house bird in part of its range, but not in others (Witherby *et al.* 1938).

(1) *P. griseus*. Birds from the Sahara to the Zambesi have been regarded as belonging to this species; characters are a rather tawny mantle (contrasting with the grey head but not strongly with the rufous rump and wing-coverts), an underside with white on throat and abdomen, and a beak black at all seasons in both sexes.

Over the eastern third of tropical Africa the birds show considerable variation that is for the most part continuous, and will be discussed below.

Over the remaining two thirds the only definite difference seems to be that in the semi-desert belt west of Lake Chad the birds are paler than elsewhere. They can be called *laeneni* Niethammer, while the birds from the remainder of western Africa to Uganda, Northern Rhodesia and Angola are regarded as nominate *griseus*. Both *ugandae* and *zedlitzi* (type-locality near Benguela, Angola) become synonyms (cf. Benson 1956).

Eastwards through the Sudan these *griseus* birds tend to have the mantle duller, less tawny, and a "purer" grey on the head—in other words their melanin is a little blacker, less brown. This tendency is most marked still further east, in Abyssinia and Eritrea, where the birds have been called *neumanni*, the type-locality of which is Salamona, 16 miles west of Massawa. In plumage these "*neumanni*" birds are transitional between *griseus* and the more southerly *swainsonii*, which differ in their darker grey head, duller brown mantle and, especially, much greyer underside with only a little whitish on throat and belly.

(2) *swainsonii*. The type locality of *swainsonii* is a vague one, northern Abyssinia, but most of the birds that have been attributed to this form are from further south and east, as far as British Somaliland. In fact dark "*swainsonii*" have been collected in both Massawa and Asmara, i.e. on both sides of the type locality of *neumanni*, and even far to the north, at Port Sudan; while on the other hand the British Museum has a specimen that looks exactly like *griseus* (not even the transitional "*neumanni*") from Sheikh, widely isolated in British Somaliland from any similar birds. This intermingling of greyer and duller with more tawny birds is no doubt what caused Grant & Mackworth-Praed to regard *swainsonii* as a separate species. We prefer to regard the variants as individual and the specimens attributed to "*neumanni*" as intergrades not meriting a separate name.

(3) *gongonensis*. Further south, mainly in northern and eastern Kenya, there occur sparrows that differ from *swainsonii* in being larger (16 ♂♂ 90–100 mm. against 80–92 in 22 ♂♂), with larger beaks and slightly brighter upper parts (*gongonensis*, type locality near Mombasa). Actually the heaviest beaks of all seem to occur in the neighbourhood of the Kenya coast and beaks tend to decrease in size inland. In southern Abyssinia birds approximating in this way to *gongonensis* have been collected within thirty miles of typical *swainsonii* at Yavello. Elsewhere there seem to be zones of intermediate birds for which the names *turkanae* Granvik, *tertale* Benson and *jubaensis* Benson have been proposed. Benson himself in discussing these birds ('Bull. Brit. Orn. Cl.' 63: 17), indicates that they are intermediates, but he also mentions that both a heavy-beaked *gongonensis* and a *ugandae* i.e., *griseus*, have been taken at Kisumu. This is another of the cases in which two types of the grey-headed sparrows, which we are inclined to treat as conspecific, have occurred together. In this solitary case off-season straggling might be responsible.

Typically heavy-beaked *gongonensis* extend south to just over the Tanganyika border. A specimen from Mkomasi matches some Kenya birds except that it is whiter on the throat; while thanks to a loan from Stockholm Museum we have been able to verify the record of *gongonensis* by Sjöstedt (1910) from the base of Kilimanjaro. The specimen shows, however, the same trend as in Kenya, being short-winged (90) and having

the beak a trifle smaller than coastal birds. In any case *gongonensis* seems not to have been collected again in this part of Tanganyika (Northern Province), where the bird attached to human settlements is, as usual, *griseus* (cf. H.F.I. Elliott *in litt.*).

(4) *suahelicus*. In most of the rest of Tanganyika the situation is remarkably confused. In considering it we have had the loan of all Berlin material, including the type of *suahelicus* from the southern shore of Lake Victoria (Bussisi). In this specimen the bright red-brown of the rump and wing-coverts contrasts very sharply with the greyish brown of the rest of the upper parts; while the head is not greyer than the mantle, the throat and breast are dark grey. The only birds we have seen that agree exactly with the type are three from the same locality, but specimens from various parts of Tanganyika—Loliondo, Shinyanga, the Rukwa depression, Iringa—and from the Loita in Kenya are very like them. (But the Northern Rhodesian specimens ascribed to *suahelicus* by Mackworth-Praed & Grant do not have the same sharp contrast between red-brown rump and grey-brown backs.) Meanwhile specimens from other localities scattered over western and central Tanganyika as far east as Mondul and Iringa cannot be separated from typical *griseus*, while some intermediate birds occur. Once more then, we have localities in which birds of two types, though differing only in degree of melanization, occur side by side, but we find it difficult to believe that two species are involved.

(5) *mozambicus*. East of the foregoing localities in Tanganyika, the coastal belt (Dar es Salaam, Kilosa, Pangani), together with the islands of Zanzibar, Kwale and Mafia, is inhabited by birds with dark grey heads that contrast with a rich brown mantle. Further, these birds appear to have pale, horn-brown beaks except in the breeding males. Such birds continue southwards into Portuguese East Africa at least as far as the Zambesi and can be called *mozambicus* (type locality Lumbo). There seems no reason to keep these birds as a species separate from *griseus*.

(6) *diffusus*. South of the Zambesi right across the continent extend the birds with a dull grey-brown mantle and pale beak, that have frequently been regarded as a distinct species, *diffusus*. There is a tendency for the birds in the more humid east to be darkest and for those from the dry west to be paler; but we follow Hoesch & Niethammer (1940) and also Macdonald & Hall (1957) in keeping *georgicus* (type-locality Damaraland) as a synonym of *diffusus*; and although birds on the Natal coast have recently been distinguished as *stygiiceps* Clancey on account of their dark colouration we do not think it worth while to recognize nomenclatorially one end of a vague cline.

On the eastern side of the continent *diffusus* seems to intergrade with the birds already discussed above. Nyasaland specimens are variable and difficult to assign, with a tendency in the north to resemble *griseus*. If *diffusus* were regarded as a species, there would be no more difficulty in regarding *mozambicus* as a richly coloured subspecies of it than there is in regarding *mozambicus* as conspecific with *griseus*. On the other hand further west, in southwestern Northern Rhodesia, *diffusus* occurs north to Mongu and east to Mazabuka and shows no transition to the *griseus* that occupy most of the rest of Northern Rhodesia.

General

So far, there seem no compelling reasons for keeping *griseus* and *diffusus* as separate species; and if this were done it is not clear how their mutual boundary could be delimited. Moreover, although the presence of dissimilar forms side by side in parts of north-eastern Africa and in Tanganyika, as described above, causes some hesitation in treating as conspecific all the populations so far considered, we feel fairly convinced that this is justifiable and the best course. But more serious obstacles are provided by two highly localized series of specimens from eastern Northern Rhodesia (described as *luangwae* Benson) and coastal Angola respectively.

Benson's "*P. diffusus luangwae*" has been found in an area less than 70 miles long in the Luangwa Valley, on the west side and separated by some 400 miles from the typical *diffusus* of south-western Northern Rhodesia. *Luangwae* is a bird of *mopane* (*Copaifera*) woodland, not, like the sympatric *griseus*, of human settlements. In plumage it is intermediate between *griseus* and *diffusus*, in that it is paler than the former, but with crown and nape more clearly distinguished in colour from the mantle. Further, *luangwae* tends to be small, wings of male 74–82, mean 77 mm., compared with 79–86, mean 82, in the neighbouring populations of both *griseus* and *diffusus*. If, as appears, *luangwae* is confined to the hot valley floor, this small size could be a response to Bergmann's rule, since the neighbouring populations range on to the plateau, some 3,000 feet above, on both sides. Especially in view of the apparent intergradation of *griseus* and *diffusus* in Nyasaland, it would be interesting to know what happens on the borders of the *luangwae* range. It is certainly difficult to account for its existence at all unless *griseus* is a very recent newcomer, in association with human settlement, from the plateau above. Correlated with this is a possibility that *luangwae* has been cut off from *diffusus* only recently by a spread of *griseus* through Northern Rhodesia to the lower Zambesi Valley.

Benson (1956) has also drawn attention to the fact that the British Museum possesses some very small specimens of *diffusus* from localities in coastal Angola that are the same as, or adjacent to, localities from which there are specimens of "*P.g. ugandae*", i.e. *griseus*. He quotes the size range of these small *diffusus* as 73–78 mm. In fact only one is a male (wing 78), from Huxe, which is within a dozen miles of Benguela. The others are females from Huxe (75.76 mm.), Luanda (73) and Dondo (75), which is about 100 miles S.E. of Luanda. All have small yellow beaks, except the last, which has a black one. As this is a *griseus* rather than a *diffusus* character in the females this specimen may be an intergrade.

The sparrow specimens from coastal Angola lent by the American Museum of Natural History and the Carnegie Museum of Pittsburgh, like the remaining British Museum specimens, are from various localities at or near Benguela, Luanda and Porto Amboim. They are all black-beaked *griseus* (total size-range of males 77–87, of females 78–83), except two. These are males with small yellow beaks, both with wings 78, thus agreeing with the small male from Huxe (Benguela) to which Benson drew attention; and are labelled as from Benguela localities (Usolo or Nsolo R. and Katenge, not precisely located). These Angola birds are abnormally small for *diffusus*, equally by comparison with the nearest population of which

we have samples, namely, from northern South West Africa. (Seven in the British Museum range 79–86, the two females being 79 and 82, but they have beaks only 11–13 mm., little larger than the Angola birds.) Most probably *diffusus* has a continuous range from S.W.A. up the arid coastal strip of Angola and there is a cline of rapidly diminishing size northwards. We do not think any useful purpose would be served by affixing a trinomial to these small birds.

It seems clear that *griseus* ranges down the Angolan coast at least as far as Benguela and there meets an abnormally small *diffusus*, the ecological relations between them being unknown. There is also a single *diffusus*, the smallest on record, from much further north, well in the *griseus* range, at Luanda. This situation is most likely to have arisen if *diffusus* had been the sparrow in occupation of the arid coastal strip until a comparatively recent invasion by *griseus*. (The marked difference in size might have helped to retain reproductive isolation, if the birds are not genetically incompatible for other reasons.) This hypothesis is preferred to the reverse because the *diffusus* show modification (in a direction that conforms with Bergmann's rule) and the *griseus* are not modified. The recent southward and seaward expansion of *griseus* that is implicit in this hypothesis conforms with the hypothesis tentatively put forward above to account for the *luangwae* situation.

Conclusion

Reviewing the whole set of problems posed by this group of sparrows through the Ethiopian Region, we cannot help feeling that the taxonomic situation is still very unsatisfactory. Particularly difficult questions are the status of *suaelicus*, of *luangwae* and of the Angola coastal *diffusus*. We believe that on the present information there is no insuperable objection to treating all the sparrows discussed as conspecific and that this is preferable to keeping *suaelicus* and *luangwae* as species distinct from *griseus*, whether *luangwae* is treated as conspecific with *diffusus* or not. As already noted, the apparent intergradation of *diffusus* with *griseus* in the north-east of its range makes it particularly difficult to treat these two birds as separate species. On the whole, while fully aware of the difficulties in the way, we propose to arrange these sparrows as follows, all as forms of *griseus*:

P.g.laeneni. Semi-arid strip west of Lake Chad.

P.g.griseus. Remainder of West Africa, south to most of Angola and east to Ethiopia (where it intergrades with *swainsonii*), Uganda, extreme western Kenya (Kavirondo), western Tanganyika and most of Northern Rhodesia.

P.g.swainsonii. Eastern and Southern Ethiopia intergrading southwards with *gongonensis*.

P.g.gongonensis. Extreme southern Ethiopia; Kenya; extreme north-eastern Tanganyika.

P.g.suaelicus. Central Tanganyika from Mwanza to Rukwa and Iringa.

P.g.mozambicus. Eastern Tanganyika and the off-lying islands; Portuguese East Africa; intergrading through Nyasaland with *diffusus*.

P.g.luangwae. Luangwa Valley, Northern Rhodesia, between 11°45' and 12°37'S.

P.g.diffusus. Coastal Angola, northern South West Africa, Bechuanaland, Southern Rhodesia, Transvaal, Orange Free State and Natal.

(to be continued)

The Status of *Eremomela turneri* van Someren and the description of a new race from the Belgian Congo

by DR. A. PRIGOGINE

Received 10th May, 1958

Eremomela badiceps turneri van Someren was considered until now as a race of *E. badiceps*. The type came from the Yala River (Kavirondo District, Kenya Colony). Only very few other specimens are known from the Western Kenya. Another one has been collected in the Nyondo forest near the Uganda-Congo border.

Some years ago I was surprised to meet *turneri* at Kalima (26°38'E, 2°41'S) and at Kailo (26°7'E, 2°39'S), in the Belgian Congo. These two localities are situated in the south-east corner of the great equatorial forest which is the normal habitat of *E. b. badiceps* (Fraser). It seemed to me that *E. turneri* must be considered as a species different from *E. badiceps*, but I could prove this only quite recently. Indeed my native hunter Kalinde Musiko collected at Kailo, in December 1957, some adults of *E. b. badiceps* and, last February, Kalinde succeeded in shooting from the same flock two specimens of *badiceps* and two specimens of *turneri*. These two species are breeding side by side at Kailo as shown by the state of the gonads of several males. I have no indication of interbreeding of the two populations and it must now be admitted that *E. turneri* van Someren is a good species.

This conclusion is confirmed by the examination of the foot of *turneri*. As *turneri* has a wing about 15% shorter than *E. b. badiceps*, it is quite natural to expect a stronger foot in *badiceps*. But *turneri* is characterised by a surprisingly weak tarsus with slender claws. It also seemed that the claws are shorter in *turneri*: about 4-5 mm. in my specimens of *turneri* for the claw of the first toe compared with about 5-7 mm. for *badiceps*. Dr. Charles Vaurie has confirmed for me that also the type of *turneri* has a weak foot and short claws. The difference is very striking and proves that the two forms are not conspecific. The bill of *turneri* is also of a different shape: more slender, and narrower at the base than in *badiceps*.

Dr. Charles Vaurie kindly compared one male of the Kailo birds with the type of *turneri* in the collection of the American Museum of Natural History. He concluded that the population discovered in the Belgian Congo represents a new race of *E. turneri*.

It is thus convenient to recognise the following two races of *Eremomela turneri* van Someren:

1. *Eremomela turneri turneri* van Someren.

Eremomela badiceps turneri van Someren, Bull. Brit. Ornith. Club, 40, 1920, p.92. Type locality: Yala River, Kavirondo District, Kenya Colony.

The type of *E. t. turneri* has the following dimensions: wing 49, tail 32, culmen (from base) 12.5 (measurements by Dr. Ch. Vaurie). The nominate race is known only from a very few localities in the Kavirondo District (Chapin, *in litt.*).

2. *Eremomela turneri kalindei* subsp. nov.

Type: ♂ adult, Kailo (Belgian Congo), 470 m, 15th February 1958. In the collection of the Musée du Congo belge (Tervuren).

Diagnosis: Similar to *E. t. turneri*, but the latter paler on head and mantle, distinctly browner, less slate coloured. Wing and tail of nominate *turneri* are also less dark, browner. The rufous of the forehead a little duller in *turneri* (*).

Measurements: Wing 4 ♂♂ 45,5–47 (46,3), 2 ♀♀ 43–47,5 (45,3); tail ♂♂ 28–30 (28,9), ♀♀ 28–31,5 (29,8); culmen (from base) 3 ♂♂ 11,5–12,0. Type: wing 46,5; tail 28; culmen (from base) 11,5.

kalindei seems to be smaller than nominate *turneri*, but the number of specimens of *turneri* is not sufficient to show it with certitude.

It is interesting to compare the dimensions of *E. t. kalindei* with those of *E. b. badiceps* secured in the same area: 7 ♂♀ collected at Kailo have 50–53 (51,6) for the wing and 32–34 (32,9) for the tail. Specimens from near Kamituga (28°11'E, 3°3'S) and from Namoya (27°37'E, 4°7'S) are a little larger: 12 ♂♀ wing 51,5–57 (53,8), tail 32–37,5 (34,4). But the difference is not significant.

Range: Known only from Kailo and Kalima (altitude about 500 m.). It is probable that the specimen collected by Fox in the Nyondo forest (Uganda-Congo border), in the collection of the British Museum, belongs to the race *kalindei*, for Mr. J. D. Macdonald who kindly compared it with a specimen of *kalindei*, found no appreciable differences.

Ecology: My specimens were shot on high trees which remained in clearings or in native plantations. *E. t. kalindei* forms parties with sometimes more than ten or fifteen birds. The association with *E. b. badiceps* encountered at Kailo is very remarkable. It seems that the food of the two species is the same: in two stomachs of *badiceps* I found a caterpillar, a spider and fragments of insects, in two stomachs of *turneri* two caterpillars and fragments of insects. It is probable that the meeting of *E. b. badiceps* and of *E. t. kalindei* on the same high tree at Kailo was due merely to an abundance of food convenient for the two species. The normal habitat of *badiceps* seems to be at lower levels of the trees than that of *turneri* and my native hunter confirmed me that *E. b. badiceps* is seen often even in second growth.

I have only imperfect indications of the breeding season. Two males taken in February and in August were in condition to breed. Mackworth-Praed and Grant record birds in breeding condition from July and August (Uganda). Specimens of *E. b. badiceps*, in breeding condition, were secured in the same area, south of the Equator, in March, July, August, December. This confirms the conclusion of Chapin that near the Equator nesting continues irregularly through most of the year.

E. t. kalindei is named after my native hunter Kalinde Musiko who for

*Dr. Charles Vaurie says (*in litt.*): "Il est évident que votre spécimen appartient à une autre race que *turneri*. En le comparant au type de *turneri*, ce dernier est plus pâle sur la tête et le dos, distinctement plus brun, moins "ardoisé"; les ailes et la queue de *turneri* sont aussi moins sombres, plus bruns, moins noirâtres; le châtain du front est aussi légèrement plus terne dans *turneri*."

many years has been successful in securing very interesting birds for the collection of the Musée du Congo belge.

I am most grateful to Dr. Charles Vaurie who made the comparison at New York and to Mr. J. D. Macdonald who examined the specimen collected by Fox. Dr. J. P. Chapin and Dr. H. Schouteden took as always a great interest in my collection and I am indebted to them for many useful suggestions. I would also like to thank Mr. R. E. Moreau for correcting my manuscript.

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A New Subspecies of *Parisoma layardi* Hartlaub

by DR. J. M. WINTERBOTTOM

Received 10th June, 1958

In *The Ostr.*, 28, 1957: 235, I drew attention to the fact that the type of *Parisoma layardi* Hartlaub, Ibis, 1862: 147 was labelled "Clanwilliam" although the type locality given by the describer was "Zwartland, Malmesbury District." At that time, the question was of purely academic interest; but a comparison of recent skins from the extreme South-West Cape with those from further north shows that the former are perceptibly darker above than the latter; and that a bird from Citrusdal, south of Clanwilliam, agrees with the northern rather than the southern birds. It is interesting to note that this darker colour of southern birds had already been observed by Andersson, *Bds. Damaral.*, 1872: 78-9. The type of *layardi* is too faded for it to be safe to rely on colour alone, though it does agree with the southern birds in that respect. But there is also a tendency for southern birds to be smaller than those from further north, in which the smallest bird of 19 measured had a wing of 65 mm., whereas two out of the four South-West Cape birds have wings of less than this; and the wing of the type is 64 mm. Under the circumstances, therefore, I propose to regard the type as wrongly labelled and the originally cited type locality as correct. This means that the name *layardi* must be restricted to the birds of the extreme South-West Cape and that the rest of the population, except that in the Basutoland mountains, which has been described as *barnesi* by Vincent (1948), is without a name. I name it as under:

Parisoma layardi aridicola subsp. nov.

Differs from *P.l.layardi* Hartlaub in its lighter and slightly more olive colour above, about Deep Olive Gray of Ridgway, as against the Dark to

Blackish Mouse Gray of *layardi*. It also averages slightly larger 9 ♂, 9 ♀, 1 o, wing 65–68 mm., av., 66.5; culmen, 13–17 mm., av. 15.1 (*layardi*, 4 ♂, 1 o, wing 63–67 mm., av. 64.8; culmen, 14–15 mm., av. 14.2). There is a suggestion that the ecological preferences are also different, *aridicola* being a bird of mountain kloofs, *layardi* of thick coastal scrub (see also Winterbottom, *l.c.*).

Type, in South African Museum, Cape Town, ♂, Noisabis, Richtersveld, Little Namaqualand, collected by J. M. Winterbottom, 25th March, 1958. Collector's number, 856; South African Museum number, 21565. Measurements: wing, 67 mm.; tail, 55 mm.; culmen, 16 mm.

Range.—The karoo areas of the Cape Province form Citrusdal and the Kammanassie Mts. north to the Okavango River (Andersson), southern Bechuanaland and the southern Orange Free State.

Material examined:

P.l.layardi, 5 (Swartland (type), Melkbos, Blaauwberg, Ysterfontein).

P.l.aridicola, 19 (Citrusdal, Vanrhynsdorp, Lokenburg, Kamieskroon, Numees, Noisabis (type), Wagenaarskraal, Beaufort West, Kammanassie Mts., Lootsberg Pass, Hanover, Swartmodder, Rooiberg).

The work on which this paper is based was done while the author held a Senior Bursary of the South African Council for Scientific and Industrial Research.

The correct name of the Peregrine Falcon

by MR. C. W. MACKWORTH-PRAED

Received, 2nd June, 1958

With reference to previous communications from the late Captain Grant and myself on the correct name of the Peregrine Falcon, Bull. B.O.C.77, pp. 48–49 and p.116, 1957. Mr. H. G. Deignan has kindly written to me pointing out that *Falco japonensis* Gmelin, Syst. Nat. 1, p. 257, 1788, has considerable page priority over *Falco communis* same work p.270.

Falco japonensis has recently (Ibis, p.253, 1949) been identified by Dr. Stresemann as a Peregrine Falcon, a specimen of which flew on board Capt. Cook's ship off Japan.

It seems therefore that the name of the Peregrine Falcon must be *Falco japonensis* Gmelin, and the name of the Western European race *Falco japonensis communis* Gmelin.

A Species New to South Africa *Xema sabini* (Sabine)

by MR. R. LIVERSIDGE

Received 11th June, 1958

A specimen of Sabine's Gull *Xema sabini* has been taken off the Eastern Cape coast. This represents a new species to the seas of Southern Africa and the Indian Ocean.

Capt. G. M. Le Gras of the trawler "Cape Infanta" recognised the gull

as a bird that he had never before seen off the Eastern Cape. He was fortunately able to collect the specimen and present it to the Port Elizabeth Museum. It was collected 7 miles off shore at Slang Bay 26th February, 1958.

This species is said by Fisher and Lockley (Sea Birds 1954) to winter off the Pacific coasts of North and South America and to a lesser degree off north Atlantic coasts. They point out that the Atlantic population is not properly known and suggest that the wintering grounds may be the Bay of Biscay. Murphy in correspondence suggests that Atlantic records may be casual.

A sight record, possibly the same individual was made at Capetown on 29th December, 1957 by K. Morgan and P. Wheeler (Ostrich Vol 29, No 2. 1958).

The specimen is in very worn condition and the racial status is uncertain.

Acknowledgement is made to Capt. G. M. Le Gras who recognised and collected the bird. I am grateful to Dr. R. C. Murphy for confirming the identity.

Herring Gulls in Wales with Partially Amputated Legs

by DR. JEFFERY G. HARRISON

Received 1st July, 1958

In the recent papers on aquatic predators of birds^{1,2}, the gulls find little mention, although Harrison mentions a Grey-headed Gull, *Larus cirrocephalus* Vieillot in west Africa, with the skin of its thighs badly torn, probably by a voracious fish and quotes Légendre's records of a Herring Gull, *Larus argentatus* Pontoppidan, which was found impacted in the jaws of an Angler Fish and a Lesser Black-backed Gull, *Larus fuscus* Linnaeus, which was found in the stomach of another Angler Fish. Harrison adds the Little Gull, *Larus minutus* Pallas, to the list—an immature found dead in Kent with its belly and intestines badly torn as by a fish, probably a large eel.

On 22nd May, 1958 I watched two Herring Gulls with partially amputated legs on the coast of Pembrokeshire, near St. David's Head. The first had lost all the toes except the hind toe on the left foot, through the tarsal joint. It was an adult and was perfectly agile at pitching on the rocks and walked without any limp. The second, also an adult, had the lower third of the right tarsus missing. Once again it was most agile on the stump, but limped badly because of the shortening. From the remarkable degree of compensation for their disabilities, I think it probable that they received their injuries in early life. As to the predator, fish, shellfish or even Grey Seals might be responsible.

References:—

¹ Harrison, Dr. James M. "Fish and other Aquatic Fauna as Predators of Birds" Bull. B.O.C.Vol.75, pp.110-113.1955.

² Pitman, Captain Charles R. S. "Further Notes on Aquatic Predators of Birds" Bull. B.O.C.Vol.77, pp.89-97;105-110;122-126,1957,

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DINNERS AND MEETINGS FOR 1958

18th November, 16th December.

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The five hundred and sixty-eighth meeting of the Club was held at the Rembrandt Hotel, S.W.7 on Tuesday, 18th November, 1958, following a dinner at 6.30 p.m.

Chairman: Mr. C. W. MACKWORTH-PRAED

Members present, 32; Guests, 8; Total, 40.

Habitats and Distribution of some Angolan Birds

Mrs. B. P. Hall gave a talk on this subject, based on species collected on an expedition to Angola in 1957 for the British Museum (Natural History). The talk was illustrated with slides of the country and the birds collected, distributional maps and an exhibition of bird skins. A full report of the expedition is being prepared for publication. Finally three new races were exhibited the descriptions of which follow. A lively discussion then took place in which Mr. R. E. Moreau, General Sir Gerald Lathbury, Mr. S. Marchant and Mr. J. D. MacDonald took part. In closing this most stimulating evening, the Chairman commended Mrs. Hall's colour slides of skins as being a most excellent way for birds to be exhibited to the meetings.

A New Race of Honeyguide from Mount Moco

by MRS. B. P. HALL

A single female of *Prodotiscus insignis* collected in open brachystegia woodland on the slopes of Mt. Moco at about 6,700' could not be matched with any specimen in the British Museum. Mt. Moco is distinguished by having a number of endemic forms and it seemed that this bird might represent another. I accordingly sent it to Dr. H. Friedmann at the Smithsonian Institution, Washington, for his opinion. He was able to match it with another female from Mt. Moco borrowed from the Chicago Natural History Museum, and confirmed my view that the two represented an undescribed form. I am most grateful to him for the trouble he took and for the very helpful notes on the characters of the new form which I have quoted from freely in the following description.

I have great pleasure in naming the new race after the collector of the type specimen, Lt. Gen. Sir Gerald Lathbury, K.C.B., D.S.O., M.B.E.

Prodotiscus insignis lathburyi (subsp. nov.)

Description: Nearest to *P.i.zambesiae* but darker above and below, the mantle and back being darker and greener, less washed with yellow olive (Olive to Dark Greenish Olive of Ridgway in *lathburyi*, against Buffy Olive to Olive in *zambesiae*). The crown and occiput a darker grey with little or no greenish wash. The chin, throat, breast, upper abdomen and sides darker grey. Slightly shorter in wing and tail, females examined of *zambesiae* having wings 74–76 and tails 47–50 mm. Differing at a glance from *P.i.insignis* and *P.i.ellenbecki* in being less olive above on the head and mantle, and paler and greyer below with white, not cream, under tail coverts and outer rectrices.

Type: Adult female, collected at 6,700' on Mt. Moco, Central Angola, on 21st August 1957 by G. W. Lathbury. B.M. Reg. No. 1957.35.1. Noted as in breeding condition. Wing 73, bill 11, tail 46 mm.

Distribution: Known only from Mt. Moco (12°27'S: 14°20'E), central Angola. *P.i.insignis* has been collected at Quiculungo (8°31'S: 15°19'E) northern Angola, and *P.i.zambesiae* at Quipungo (14°51'S: 14°30'E), southern Angola, so that the range of *P.i.lathburyi* is probably restricted to the Bailunda highlands.

Specimens Examined: The type has been compared in the British Museum with 12 specimens of *insignis*, 19 of *zambesiae* and 11 of *ellenbecki*.

Variation in the Angola Lark, *Mirafraga angolensis* Bocage With a Description of Two New Races

by MRS. B. P. HALL

Mirafraga angolensis has a limited distribution in a narrow strip across central Africa from the Benguela plateau in central Angola to the Marungu highlands of south-eastern Belgian Congo. Within this range its occurrence is sporadic and is limited to suitable grasslands in the highlands and along the Zambesi/Congo watershed; possibly more intensive collecting in some areas will establish more continuity than is at present known. Observations in the field suggest that the species is commonly found where there is damp ground in the valleys or ditches of open grassland.

Examination of specimens collected in 1957 in eastern and central Angola indicated that there was some geographical, as well as much individual, variation within the species, and this was also suggested by Mr. C. W. Benson who collected specimens in the Mwinilunga area and asked me to examine them. Geographical variation was confirmed when a series was brought together by loans from the Chicago Natural History Museum, The American Museum of Natural History, The National Museum of Southern Rhodesia and the Musée du Congo Belge, Tervuren, in all 35 specimens covering the whole known range of the species. The apparent pattern of variation is of dark birds in the centre of the range, eastern Angola and to a less extent north-west Rhodesia, with more rufous birds at either extreme, in central Angola and in Marungu, those from Marungu

being the most richly coloured. It seems useful therefore to recognise three races though it is to be expected that further collecting will show that all three intergrade and that it will therefore be difficult to name birds from intermediate areas satisfactorily.

1. *Mirafra angolensis angolensis* Bocage. Jorn. Lisbon 8, p. 59, 1880: Caconda.

Description—*Male and Female*: Head and mantle cinnamon with dark brown or black centres to the feathers; upper tail coverts cinnamon or pink-grey with rarely any black; wings and tail brown with rufous edges to wings and central rectrices, dark vermiculations on inner secondaries, and with white edges on two outermost pairs of rectrices—the white being confined to the outer web on the second outermost pair and covering the outer half of the inner web on the outermost pair. Throat white, underparts buff lightly streaked on breast.

Distribution: Benguela highlands as far east at least as 17°30'E.

Specimens Examined: Mombolo (3♂, 3♀), Dondi (3♂, 3♀), Nova Lisboa (1♂), Vouga (2♂, 2♀), Cuambo, 50 miles east of Vila General Machado (1♀).

2. *Mirafra angolensis antonii* (subsp. nov.)

Description: Appearing generally darker above than the nominate race with a greater proportion of black to cinnamon in the plumage. This is due to a broadening of the black centres to the feathers, particularly in the crown, mantle and central rectrices. In addition the markings on the secondaries are usually darker and heavier, and the upper tail coverts greyish, marked or barred with black, very rarely showing a pinkish tinge. Below, more heavily streaked on the breast. The characters of the new race are most marked in the two females examined, one of which is almost totally black above with only an occasional light edge to feathers of the mantle, and the other is only slightly lighter having a little rufous in the mantle.

Type: Adult ♂ collected on open plains 5 miles east of Luacano, Eastern Angola, 3rd August, 1957 by A. L. Archer. B.M.Reg.No. 1957.35.2.

Distribution: Specimens truly typical of this race are known only from Luacano, but others from Dilolo on the Angola/Congo border, and from the Mwinilunga area, are close to it and should be referred to it until further specimens are available (see notes).

Specimens Examined: *M.a.antonii* 4 ♂, 2 ♀ Luacano; near *antonii* 1 ♂ 38 miles north-east of Dilolo, east Belgian Congo, 6 ♂ Mwinilunga area.

Notes: Named after the collector. Unfortunately no specimens examined of this or the nominate race are in really fresh plumage, mostly being fairly worn, or worn and just starting to moult. The series are not therefore ideal for comparative purposes but are nevertheless truly comparable. There are also several specimens in each series stained from burnt grass which may conceal some of the true colouring but does not alter the pattern. The Rhodesian series, though geographically furthest from the nominate race, has the appearance of being intermediate, having more rufous in the mantle and sometimes lighter streaking below than *antonii*. Though in series Rhodesian birds are appreciably darker than *angolensis*, the least heavily marked differs little from the most heavily marked *angolensis*. When some females and fresh-plumaged specimens are available

from Mwinilunga it may be necessary to reconsider the systematic position of Rhodesian birds.

3. *Mirafra angolensis marungensis* (subsp. nov.)

Description: Closest to the nominate race but more richly coloured, rufous rather than cinnamon particularly on the nape and lower back, and on the edges of the wings. Below more richly washed with rufous on the breast and with heavier streaking. Possibly averaging larger.

Type: Adult ♂ collected at Kasidi, Marungu 20–27 June 1931 by G. F. de Witte. Congo Museum Reg. No. 22285.

Distribution: Marungu.

Specimens Examined: 2♂, 2♀ from Marungu.

Notes: All are in fresh plumage and not therefore truly comparable with the series of *M.a.angolensis*. Nevertheless the differences noted seem too great to be accounted for by wear alone and the geographical isolation of the Marungu population makes it more reasonable to create a new name on what is not as adequate material as one could wish for.

I am very grateful to Mr. C. W. Benson for observations on the specimens he collected at Mwinilunga, and to the Directors of the Museums from whom specimens were borrowed.

Table of Measurements

	<i>Wing</i>		<i>Bill</i>		<i>Tail</i>	
	♂	♀	♂	♀	♂	♀
<i>angolensis</i> 9♂ 8♀	82–87	76–87	19–21	17–20	44–51	42–48
<i>antonii</i> 4♂ 2♀	86–88	77,81	19–20	16,19	49–50	44–46
<i>nr. antonii</i> 6♂	82–85		18–19		46–51	
<i>marunguensis</i> 2♂ 2♀	86,87	83,88	19,21	18,20	46,51	46,49

A New Race* of *Cossypha natalensis*

by MRS. B. P. HALL

Specimens of *Cossypha natalensis* Smith were collected on the 1957 Angola Expedition in the strips of riverine forest of the eastern districts and in the mist forest at Gabela. The four from Gabela, together with specimens in the British Museum from Ndalo Tando (Vila Salazar), Bembe, Quiculungo and Landana are remarkably uniform in colour having dark heads and rich slate blue mantles, while two from the Luau River on the Angolo/Congo border east of Texeira de Sousa, differ from them in the colour of the mantle and crown and are also dissimilar though both are adult and were collected close together.

* Meise's name and description of the Angola *Cossypha* were received too late to stop Mrs. Hall's description of the same bird being published, but it has been possible to eradicate the duplicate name.

Clancey (B.B.O.C. 76, 1956: 115) has discussed variation in this species in southern Africa, and recognised several races, though most authors have considered the species monotypic on account of the high degree of individual variation found within populations. Examination of the whole series in the British Museum indicates that there are two constant populations in the southern parts of the range, on the extreme east in Natal and west in north-western Angola. Both these constant populations have dull crowns with the Angola birds darker both on the crown and in the blue of the wings and mantle. Throughout the rest of the range birds are brighter headed but variable, some populations tending to have a higher percentage than others with very richly coloured heads—this is particularly true of the populations of coastal Tanganyika and Mafia Island where rich red crowns are common, while birds of Nyasaland and inland Tanganyika are more usually less bright. The two specimens obtained on the Luau River represent the extremes of variation found within the East African range, the female being as richly coloured as any, while the male is nearly as dull as Natal birds. It seems therefore inadvisable to recognise local races within this variable area, stretching from eastern Angola to Abyssinia and the Transvaal but the name *intensa* Mearns could be used to cover the whole, while Clancey was justified in restricting *C.n.natalensis* to Natal and extreme southern coastal Portuguese East Africa. No specimens have been examined of *egregior* Clancey or *garguensis* Mearns. The Angola population has been named *Cossypha natalensis larischi* Meise, Abh. & Verh. Nat. Ver. Hamburg (1957) 1958 p. 73.

Description: Similar to *C.n.natalensis* in being uniform and with a dull olive brown crown, not rufous or rufous-brown as in *intensa*. Differing from *natalensis* in being darker on the crown and a deeper slate blue on the mantle and wings, and having a shorter tail, ♂ 67, ♀ 58–63, against ♂ 76–81, ♀ 69–78 mm. (these measurements are those quoted by Clancey for *natalensis* which cover British Museum specimens examined).

Distribution: North-western Angola from Gabela north to the Portuguese Congo. The eastern limits at present unknown but not extending as far east as Luacano.

Specimens Examined: 1 ♂, 2 ♀, 1 imm. ♀ Gabela. 2 ♀ Vila Salazar, 1 imm. ♀ Dondo, 1 Bembe, 1 ♂ Quiculungo, 1 “Angola”, 1 Landana. Compared with ten of *C.n.natalensis* and a considerable series of *C.n.intensa*.

Notes: I have been fortunate in being able to examine this series with both Dr. H. Friedmann and Mr. P. A. Clancey both of whom agree that the Angola birds require a name. I am indebted to both of them for observations and advice on the species, though I am aware that Clancey does not share my views on the use of *C.n.intensa* for all the variable populations.

Further Population Studies of the Jay

by DR. ANDREW KEVE

Received 15th October, 1956, but held over until normal communication was restored with Hungary.

In the Jay, *Garrulus glandarius* Linnacus, we have a species presenting many taxonomic problems. My study of this in 1939 invoked much discussion, in particular, a very objective critique by Kleinschmidt, which I must accept—naturally in evolutionary problems he holds his own

opinions. It is difficult for me to answer many of the points raised, because the greater part of the material on which I worked was destroyed when the Hungarian Institute of Ornithology was burnt down in 1945, but there are some with which I can deal. I am grateful to all those who have commented upon my study, especially to Professor Erwin Stresemann.

My original studies were based upon 756 skins and later I have seen many more, including a series of 38 from Bulgaria and Greece and others from Spain. The Jay is a very vital species with many well differentiated races and I fully realise that even this series is insufficient to clarify all the systematic problems involved.

Garrulus glandarius albipectus caused me considerable surprise. I was prepared to describe a new race from Normandy, when I noticed how variable this race is and how near it stands to the British *G.g.rufitergum* and that the French and Italian populations show a similar variability. This can be compared to the variability of *Motacilla flava dombrowskii*, and the problem is complicated by winter visitors from northern and central Europe. Many transitional specimens (*vide* Kleinschmidt) make it impossible to determine exactly the populations of Holland, Belgium and northern France. This is in accord with the opinions of Meinertzhagen (1947), J. M. Harrison (1953), Mayaud (1953), Voous (1953) and Vaurie (1954). The only question now is the correct name for these birds.

Mastrovic (1942) agrees that the eastern limit of *G.g.albipectus* is in Dalmatia, the eastern coast of the Adriatic and the islands of western Greece. This population was named *G.g.yugoslavicus* by Voous (1953), but Vaurie regards this as a synonym for *G.g.albipectus*. Migrants cause difficulties in this area too and ringing results from Italian stations show how near is the relationship between these populations. It is not clear how far this race extends eastwards in the mountains of the western Balkans. All my material from here was burnt, but to the best of my recollection the race from Hercegovina is *G.g.albipectus*, but those from Bosnia belong to the nominate form.

On my visit to the Royal Scottish Museum in 1947, material from that country attracted my attention, but I had no time for a detailed study. I agree with Vaurie that coastal populations tend to develop dark forms.

I have also remarked that the Iberian Peninsula may have more than one form. I believe that to unite the Iberian, Sardinian and Corsican Jays is wrong. I should even like to separate the Jays of Sardinia from those of Corsica, having studied 13 skins from Corsica and 19 from Sardinia, through the kindness of Professor A. Laubmann. Naturally in northern Sardinia and southern Corsica there lives an intermediate form and movements of these Jays can occasion mistakes. *G.g.corsicanus* Laubmann belongs to the dark rufous sea coast group and *G.g.ichnusae* Kleinschmidt to the greyish Continental group, which stands nearest to the other insular form *G.g.cretorum* Meinertzhagen.

I have demonstrated that Meinertzhagen's race is also different on osteological characters. *G.g.graecus* mihi is very near to it, but the validity of it was proved by Niethammer and J. M. Harrison. According to Matvejev the north-western limit of its area is the Kopaonik mountain (43 20', 20 50') (1955) and *G.g.glandarius* is the form in northern Serbia. Pateff (1950) states in his book that the nominate form breeds in the

greater part of Bulgaria, with which I agree. *G.g.graecus* is found only in the south-west.

Jordans (1940) experienced great difficulty in determining his material, because most of it came from the neighbourhood of Plovdiv (Philippopolis). I am very grateful to him and to Dunajewski for their kindness in sending me these skins for comparison and I must thank Professor von Jordans again for making it possible for me to continue my work on systematics, even during the war. In the area of Plovdiv three races come into contact—*G.g.glandarius*, *G.g.graecus* and *G.g.ferdinandi*. Due to the resulting intergradation it is not surprising that his problem was confusing.

G.g.ferdinandi (7 skins) is quite distinct from the neighbouring greyish races by its rufous plumage and stands in colour nearest to the Iberian population. As yet its distribution is insufficiently known. It is certain that it inhabits the coast of the Black Sea near Burgas, but westwards near Plovdiv birds are no longer typical of that race. Birds from north-eastern Bulgaria and from the Dobrogea have yet to be studied.

Unfortunately there is no possibility of considering the three races I have described from the islands of the east Aegean, because all the skins were lost in the fire. So far I have been unable to replace them. The island fauna of the Aegean is most interesting and I would like to reassess my races in the light of Stepanek's excellent study on *Gymnodactylus kotschii*. In 1939 I dealt in detail with the Jays of Asia Minor, except for the south-western part which is ornithologically *terra incognita*.

I offer these additional notes to show that there are still many questions which require elucidation, particularly on the validity of the different races. I think it is important that comparisons should be made on freshly collected material, in order to avoid the pitfalls of the "museum races". The Jay has such a large literature that I am only giving the titles of my own papers referred to in this work:—

1938 "*Quelques remarques sur les Geais de France*" L'Oiseau et R. Fr.Orn.,VIII, pp.148-9.

1939 "*Systematische Studien über die Corviden.II.*" Aquila,XLII-XLV,1935-8, pp.141-226.

1939 "*Ergänzung zur systematischen Revision des Eichelhäfers*" Aquila,XLII-XLV, 1935-8,pp.542-549.

1939 "*A New Jay from the Balkans*" Bull.B.O.C.,No.CCCCXIX,pp.70-1.

1939 "*Ein neuer Eichelhäfer in der Schweiz*" Orn.Beob.,XXXVI,pp.117-8.

1942 "*Der Eichelhäfer Luxemburgs*" Vogelfreund,1.2.,p.18.

1942 "*Der Eichelhäferzug in Ungarn im Winter 1939-40*" Aquila, XLVI-XLIX,1939-42,pp.366-372.

1944 "*Ein neuer Eichelhäfer aus Südost-Bulgarien*" Aquila,L,1943,pp.369-70.

1948 "*Über die ornithologische Sammeltätigkeit Franz Schillinger's im russischen Reich*" Annal.Nath. Mus.Wien,LVI,pp.77-129.

I wish to express my thanks to Dr. James Harrison for his help with my manuscript.

Notes on the Ploceidae

by MR. C. M. N. WHITE AND MR. R. E. MOREAU

Part Two

OTHER NON-PLOCEINE SPECIES

Received, 2nd June, 1958

Bubalornis

Slater (1930) treats *Bubalornis niger* Smith as conspecific with *B. albirostris* (Vieillot); Mackworth-Praed & Grant (1954) keep the latter

apart as a monotypic species*. The difference is mainly in the beak, which is red in *niger*, but in *albirostris* white in the breeding season, black in the non-breeding. It does not seem to be known what the relations are between the two forms in Abyssinia, where they both occur, or whether they interbreed; but it appears that latitude 10°N. is the approximate boundary between them. On the whole there do not seem to be adequate reasons for keeping these apparently vicariant birds as distinct species.

Among the red-bellied birds there is much individual variation in the amount of whitish in the basal half of the remiges and to such variation we ascribe both *scioanus* (Salvadori), as does Friedmann (1937), and *nyansae* (Neumann). This latter form (described on absence of white at the base of the primaries) is admitted by Sclater (1930) from Kavirondo (the type-locality) to near the head of Lake Nyasa, but is synonymized by Mackworth-Praed & Grant with *intermedius*. Since birds from both Shinyanga in north central Tanganyika and from Mkomasi, north-eastern Tanganyika (in the British Museum) are *intermedius*, Sclater's distribution leaves a most unlikely long narrow distribution as the possible one for *nyansae*. However, since specimens have been reported from Saranda, near Dodoma, on the Tanganyika Central Railway, as *nyansae* (Friedmann & Loveridge 1937), we asked Messrs. H. J. de S. Disney and H. Lamprey if they could kindly supply specimens from critical areas. The result shows that near Kondoa the birds have only a little whitish at the base of the remiges and at Dodoma some birds have much white and some not.

The range given by Mackworth-Praed & Grant for *B.a. intermedius* is incorrect in more than one particular. As Cave & Macdonald (1955) have pointed out, there seems no evidence that it occurs in the southern Sudan, while in Tanganyika there is no record of it from the south-east nor from approximately west of a line drawn from Mwanza to the head of Lake Nyasa. (R. J. Stowell *in litt.* reports it common in Usanga, about 50 miles north of Lake Nyasa, but it seems to be absent from the Lake Rukwa depression, according to L. D. E. F. Vesey-Fitzgerald *in litt.*) The species is evidently confined to thorn and baobab country but absent from *miombo* (*Brachystegia*).

Dinemellia dinemelli.

There is no confirmation (Chapin 1954) of Böhm's old record of *D.d. böhmi* (cit. Reichenow 1902) from Mpala on the south-west shore of Lake Tanganyika and, especially as the area does not seem suitable ecologically, the range of this bird is not taken as extending into the Belgian Congo.

D.d. ruspolii, described as having more white on the secondaries, is accepted by Mackworth-Praed & Grant for the birds of southern Abyssinia and Italian Somaliland. They locate "Banan", the type locality, "about 110 miles west of Dolo". This appears to be incorrect. The type was collected by Ruspoli but, according to the rough maps in Boll. Soc. Geog. Ital. 1893,(3)6: 689 and 708, he did not visit a point anywhere near 110 miles west of Dolo on either of his journeys in north-east Africa. Salvadori

*There seems however to have been some doubt in the minds of these authors. Although they cite *B. albirostris* as a monotypic species confined to part of northern tropical Africa (p.859), they say later on the same page "over the whole of the rest of Africa this species lays . . ."; and on the same page the call attributed to *albirostris* is quoted without caveat from that in "Ibis" 1939:315 from field observations on another form, *intermedius*, which they place as a subspecies of *B. niger*.

himself in his original description says that the specimen had no label and gives the type locality as "Banan (?)", later remarking that he was able to get no idea of the position of "Banan or Barsan". Zedlitz (1911: 10) on grounds unknown, places the type-locality in "N. Somaliland", whatever that may mean.

In any case it appears that *D.d. ruspolii* is not worthy of recognition. As remarked by van Someren (1922), birds of this species somewhat further south, along the Juba River, show exceptionally high individual variation, and at least some specimens from the coast of Italian Somaliland are typical *D.d. dinemelli* (Zedlitz 1911:10).

The British Museum possesses only one specimen regarded by Mackworth-Praed & Grant as showing the *ruspolii* character, namely a female from Dibbit, 100 miles north-west of Obbia.

Plocepasser mahali.

P.m. propinquatus Shelley, distinguished from the Abyssinia—Kenya population, *P.m. melanorhynchus*, only by smaller size, was given the type locality "Somali" by its describer. Mackworth-Praed & Grant (1955) cite the type-locality as "Bardera, Juba River, Italian Somaliland", but do not seem to have published their reasons. Professor J. Berlioz informs us that the type is in the Paris Museum, and that its label bears no locality. The specimen is, however, registered as bought from "Abdou-Gindi, du Pays des Somalis". The other species represented in the small collection purchased at the same time support the idea that the type came from close to the Juba River.

P.m. pectoralis. Mackworth-Praed & Grant extend the range north through Tanganyika to Kenya Colony, but we can hear no evidence for the bird's occurrence north of the Tanganyika Central Line.

Plocepasser donaldsoni.

The original type locality, given as "Eastern Africa", seems to have been restricted to "nr. Lasamis, between Lake Rudolf and the N. Guaso Nyiro, Northern Frontier Province, Kenya Colony" by Sclater (1930) without publishing the reasons. It has however been accepted by Mackworth-Praed & Grant (1955), who paid special attention to such matters, and we accept it although the basis of the restriction seems no longer ascertainable.

Plocepasser superciliosus.

Mackworth-Praed & Grant (1955) accept three subspecies as follows, citing distinctions confined to colour of mantle:

P.s. superciliosus, ("mantle earth-brown washed with russet") Senegal—eastern Sudan (Roseires).

P.s. brunescens Grote ("having a warmer wash of russet on the mantle"), French Equatorial Africa—western Abyssinia and north-western Uganda.

P.s. bannermani Grant & Mackworth-Praed ("differs from the nominate race in having the mantle earth brown"), Eritrea, south-eastern Sudan, eastern and southern Abyssinia, and north-western Kenya Colony.

It will be noticed that the alleged distinctions are the extent of the russet tinge on the mantle, and that the ranges ascribed to the three forms are rather odd.

R.E.M. assembled a series of 48 specimens from parts of the ranges of all three named forms and was unable to see any satisfactory geographical

as distinct from individual differences, though it is true that several of the most warmly coloured specimens come from Bahr-el-Ghazal—West Nile Prov. area. D. Goodwin and C. H. B. Grant, who kindly examined the specimens at different times, agreed. We conclude therefore that *P. superciliosus* is best treated binomially.

Pseudonigrita arnaudi.

Mackworth-Praed & Grant (1955) give the range of the typical form (with *kapitensis* Mearns as a synonym) as "western and southern Sudan to Uganda and north-eastern Tanganyika Territory", and of *P.a. dorsalis* (Reichenow), distinguished by a dark mark on the back, as "southern Kenya Colony to the Ikoma, Mwanza and Tabora districts, Tanganyika".

We agree with the sinking of *kapitensis*, which was described simply on size. Friedmann's (1930) measurements of 60-63 mm. for typical birds, by comparison with which he was prepared to maintain *kapitensis*, are based on erroneous data, for seven Sudanese (typical) birds in the British Museum have a wing range of 63.5-67.

The map in Mackworth-Praed & Grant for the distribution of *P.a. arnaudi* shows a connection between the Sudan—N. Uganda and the N. Tanganyika populations via southern Uganda and western Kenya for which there is no evidence; but it omits the connection round the east side of the Kenya Highlands, which is indicated by British Museum specimens from Machakos and Athi River. We have not been able to verify their grounds for bringing *P.a. dorsalis* into Kenya.

Passer iagoensis.

Opinions have been divided as to whether the various African sparrows, otherwise placed in the species *motitensis*, should be treated as conspecific with *iagoensis* of the Cape Verde Islands or not. The resemblances certainly are very great and the only objection to making them conspecific seems to be the wide geographical gap, the entire width of West Africa, that at the present day separates the insular *iagoensis* from the nearest similar African population, *kordofanicus* of the north-western Sudan. We discount this objection and think it preferable to recognize the close resemblance between the Cape Verde and the continental birds by treating them as conspecific.

Unlike Sclater, Mackworth-Praed & Grant regarded *Passer insularis*, of Socotra, as a separate species, with the paler *hemileucus*, of neighbouring Abd-el-Kuri as a subspecies. As, however, the only difference from *iagoensis* subsp. is that the insular birds have the rump and upper tail-coverts grey instead of sandy, we think that the grounds for separating them specifically inadequate. The same authors differ from Sclater in treating *P. rufocinctus* as a separate, monotypic, species. Again we agree with Sclater, for *rufocinctus* is allopatric to all forms of *iagoensis* and differs only in having ear-coverts grey, outlined above and behind by sandy instead of with black, which in the contiguous *P.a. shelleyi* is variable.

These African populations *iagoensis* show several examples of convergence of characters.

(a) The Kordofan and the South West African (with S. W. Angola) birds are the brightest and most sandy-coloured, with the best-defined black streaks on the mantle.

(b) The Uganda-Abyssinia birds resemble those of the Union of South Africa in being duller above, with broader black streaks.

(c) The biggest and blackest beaks are those of Socotra with Abd-el-Kuri and of south-western Africa.

Passer castanopterus Blyth.

The type-locality, "Somaliland", in the original description, is given by Mackworth-Praed & Grant (1955) as "northern Italian Somaliland", but the grounds for this are not known. The same authors include south central Abyssinia, as well as southern Abyssinia, in the range of the brighter-yellow *P.c. fulgens* Friedmann, and again we are unable to verify this, for the British Museum possesses no specimen from so far north and Friedmann's (1937) only Abyssinian record was at Chaffa on the Kenya border.

The discussion about the locality of Hamerton's bird from "Bera" in Friedmann (1937) is settled by the fact that it is, according to its original label, 120 miles N.W. of Obbia, not in "southern Somaliland". It is a little more strongly coloured below than any specimen from British Somaliland, but it is with a buffy yellow, not with the clear colour of *fulgens*. From the southern half of Somalia there seems to be no record of the species, so that the known ranges of the two subspecies can be cited as:

P.c. fulgens: Abyssinia close to the Kenya border; Kenya south to about Lokitaung and Marsabit.

P.c. castanopterus: British Somaliland and northern Somalia.

Auripasser luteus, *A. euchlorus*, *Sorella emini* *bey*.

Sclater (1930) so classified these birds. Lynes (1924: 686), with exceptionally good experience of *emini* *bey* and *luteus* in the field, kept them as two species of *Passer*, and had reason to think that they had overlapping breeding ranges in Darfur. Meinertzhagen (1954) put all three in *Passer* and actually made them conspecific. We agree that there is no adequate reason for keeping them out of that genus, but the evidence of Lynes makes it necessary to keep *emini* *bey* and *luteus* as specifically distinct, at least for the present. Since *euchlorus* is allopatric to *luteus* and differs only in the absences of brown on the back and wings these two birds can be treated as conspecific.

As regards *S.e. guasso*, after examining series from the American Museum of Natural History and the British Museum, we agree with those who have synonymized it with the nominate form.

Petronia xanthosterna.

The subspecies that have been described from East Africa are unsatisfactory. *P.x. kakamariae* Stoneham (type-locality, Karamoja, eastern Uganda) is accepted by Grant & Mackworth-Praed, 1944, 'Bull. Brit. Orn. Cl.' 64: 37-39, as being larger than *P.x. pyrgita*, males 91-92 mm., females 86-90, compared with *pyrgita* males 87-90, females 77-87. They assume, however, that two "males" from the neighbourhood of Mr. Elgon, reported by Granvik as measuring only 86 and 88 mm., which should on geographical grounds be *kakamariae*, were wrongly sexed. We find that a male in the British Museum from Moroto (Uganda, close to the type-locality of *kakamariae*) measures only 87 mm. We conclude that no subspecies can be based on size and we can see no colour differences. We are much indebted to Dr. A. L. Rand for sending measurements of specimens in the Chicago Museum.

P.x. massaica is a poor subspecies. Specimens from the range as given by Mackworth-Praed & Grant are just perceptibly darker than *Pyrgita*

but are, if anything, browner rather than more ashy, as claimed by these authors. We do not think the subspecies worth maintaining.

Petronia superciliaris

Considering the range, from Cape Town to the Central Line of Tanganyika, the variation is slight. There is evidence that, as might be expected, the birds nearest the Equator are the smallest, and presumably there is a cline of diminishing size up the East African coast. Birds from the Transvaal tend to be paler than others, but to the northwest, in the southern Belgian Congo, they are darker again. The best course appears to be to treat the species binomially.

Carpospiza Müller is, following Meinertzhagen, 1954, 'Bds. Arabia', p.100, treated as a synonym of *Petronia*.

Petronia dentata buchmanani appears, as Bannerman (1949) comments, to be very poorly defined and provisionally *P. dentata* is treated as binomial.

Sporopipes squamifrons.

Vincent, 1935, Bull. Brit. Orn. Cl. 55: 98, restricted the type-locality to Graaf Reinet in the central Cape Province; Macdonald, 1957: 158, overlooking this, restricted the type-locality to Kuruman. Although from the original wording of the describer, Andrew Smith, the restriction to Kuruman is certainly the more natural one, there is no sufficient reason for setting aside "Graaf Reinet", since Dr. G. McLachlan states (*in litt.*) that it is just within the southern border of the bird's range.

We follow Hoesch & Niethammer (1940) and M. P. S. Irwin (*in litt.*) in treating *S.s. damarensis* Reichenow and *S.s. fuligescens* Clancey as indistinguishable from nominate series.

Sporopipes frontalis.

R.E.M. has been able to examine 91 specimens, including a loan from the American Museum of Natural History.

S.f. pallidior Hartert (type-locality Zinder), which Bannerman (1953) thought a poor form, must be synonymized with the nominate. Although some of the specimens from Damergu and Darfur are exceptionally pale, others, and Bates's specimens from Tazza Wells, Tawa and Tillia, close to the type-locality, cannot be separated from specimens from further south. We also agree with Mackworth-Praed & Grant (1953) that *S.f. abyssinicus* is a synonym, so that the range of the nominate form extends from Senegal to Abyssinia.

In Kenya and Tanganyika the situation, as described by Mackworth-Praed & Grant, is confused. They extend *S.f. emini* ("mantle and rump more ashy grey" than the nominate form) from the southern Sudan to Kenya, north-eastern and central Tanganyika, while also admitting *cinerascens* (type-locality near Mwanza) for Uganda and Central Tanganyika ("mantle and rump darker than *emini*"). Cave & Macdonald (1955) admit *emini* for the Sudan south of 6°N. as "rather darker" than the nominate birds.

The most richly coloured among the 91 specimens come from the southern Sudan, N.E. Uganda, Kenya and northern Tanganyika. R.E.M. finds it impossible to separate these into two geographical forms and concludes by recognizing only *S.f. frontalis* and *S.f. emini*, with *cinerascens* and *loitanus* van Someren as synonyms of the latter.

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A New Lark from Northern Rhodesia

by MR. C. M. N. WHITE

Received 14th July, 1958

Mirafraga angolensis minyanyae subsp. nov.

Description: differs from nominate *angolensis* Bocage in being lighter above; the red of the crown pinky vinous rather than cinnamon; hind neck and upper mantle greyer, less rusty or sandy yellow; black streaking above less marked, the red areas on the feathers more pinkish vinous, less rufous; the feathers of the back and scapulars with greyish fringes; lower back and rump paler.

Distribution: the Minyanya plain, N.W. Balovale district, Northern Rhodesia.

Type: male adult, collected on the Minyanya plain, Balovale, Northern Rhodesia on 25th June, 1958. In my collection.

Remarks: *M. angolensis* ranges from Central Angola to the Katanga and Mwinilunga. Birds from this area are not wholly homogeneous, but their variation is being studied by Mrs. Hall. I have seen specimens from all these localities, and compared the new race with a series of Mwinilunga birds. When I explored the Minyanya plain in 1943 I missed this species

which inhabits the mid slopes of the plain in contrast to *M. africana kaballi* White, which keeps to the top of this watershed plain. Although the two species do occur in the same area, they seem to be somewhat spatially separated by having preferences for different levels of the plain. A series of five *M. angolensis* was collected on the Minyanya plain.

Further Breeding Records from Northern Rhodesia

Part I

by MR. C. W. BENSON AND CAPTAIN CHARLES R. S. PITMAN

Received 15th July, 1958

Introduction

Since a "Check List of the Birds of Northern Rhodesia" (1957) (hereinafter referred to as the "Check List"), by C. W. Benson and C. M. N. White, went to press, many further breeding records have been accumulated. In this paper only those relating to species for which the data in the Check List were particularly scanty, or even completely lacking, are included. A few data in the Check List provided by Mr. G. Wedekind or by C. W. B. have been expanded.

All the contributors to this paper are members of the Department of Game and Tsetse Control, except that we must also thank Messrs. R. Liversidge, J. M. E. Took and G. Wedekind for information. All localities mentioned are fully specified, or have already been so in the Check List, except for Msweba, which is at 14°28'S., 26°58'E. Eggs recorded as collected are either in the British Museum or will be forwarded there by C.R.S.P. Any birds mentioned as collected are in the National Museum, Bulawayo. The nomenclature in the Check List is followed.

General Information

This section is confined to the description of four mixed colonies of certain aquatic species, not suitably dealt with in normal systematic order.

W. F. H. Ansell, on the Luswishi River at about 13°15'S., 27°18'E., on or about 30th June, 1957, found a mixed colony of nests in riparian evergreen forest in standing water. It was only possible for him to observe the colony for half-an-hour before sunset. No incubating birds were observed. According to local information, the nests are occupied annually from about February to July. The components of the colony were as follows:—

Phalacrocorax a. africanus (Gmelin). Apparently the most numerous species in the colony. Nestlings well grown, none in down.

Anhinga anhinga rufa (Lacepède & Daudin). Young in all stages, from still in down to almost adult size.

Anastomus l. lamelligerus Temminck. All well grown, some able to fly from tree to tree. Compared to adults, plumage duller and browner, bill shorter, lacking any space between the mandibles.

On 15th March, 1958, N. J. Carr found a colony of several hundred nests in a group of thorn trees, in a flooded backwater of the Kafue River at 15°45'S., 26°15'E. He took single eggs from selected nests, and further

details, together with the estimated numbers of nests of each species, are as follows:—

Phalacrocorax a. africanus. Several hundreds. Three eggs (two fresh, one slightly incubated) are pale blue, almost completely obscured by pale powdery chalky white; size 43.2 x 30.0, 44.1 x 29.2, 42.8 x 30.1 mm.

Anhinga anhinga rufa. Twelve. No eggs taken.

Ardea c. cinerea Linné. Twelve. One greenish blue egg, almost fresh; size 57.3 x 45.0mm.

Egretta alba melanorhynchos (Wagler). Over one hundred. Two pale blue eggs, one slightly incubated, size 57.4 x 38.0, one heavily incubated, size 56.6 x 39.0mm.

Anastomus l. lamelligerus. Twenty-four. Five eggs, all fresh except for one moderately incubated, all whitish, tinted grey, with a dirty marbling effect, all of them much nest stained pale brownish; size 59.8 x 40.3, 58.6 x 40.3, 54.1 x 39.3, 55.1 x 38.2, 53.4 x 38.5mm.

On the Kafue River at 14°27'S., 26°44'E., on 20th March, 1958, Wedekind found a colony in a large clump of reeds on a sand-bank in the middle of the river. This consisted of at least thirty nests of *Butorides rufiventris* (Sundevall), likewise ten each of *Ardeola ralloides* (Scopoli) and *Nycticorax n. nycticorax* (Linné). Some of these nests contained eggs, others young in all stages of development. All eggs taken were pale blue. Two clutches each of C/3 fresh of *N.nycticorax* measure:— 52.3 x 33.2, 50.2 x 35.0, 54.0 x 33.3: 47.0 x 34.2, 49.4 x 35.0, 46.7 x 34.3mm. A clutch of C/4 fresh, of *B.rufiventris*, measure 38.9 x 30.3, 41.6 x 29.5, 39.3 x 28.4, 39.2 x 30.3mm. A C/3 soon to hatch, of *B.rufiventris*, taken by C. W. B. at Ngoma, 15°54'S., 25°58'E., 26th July, 1957 is pale blue, and measures 36.1 x 28.2, 36.5 x 29.0, 37.5 x 28.2mm. This was from the Nkala River at 15°54'S., 25°58'E., at this season little more than a series of pools almost disconnected. The nest was in *Phragmites* reeds, 3ft. above water level, a flimsy "saucer" of reeds, lined with finer grass. There were probably other pairs breeding within a quarter-mile stretch of the river, but there was no compact colony. The call of *B.rufiventris* seems never to have been recorded. It is therefore of interest that C.W.B., who is very familiar with this heron, and has never previously heard any call, when on a dam at Mumbwa at sunset on 28th February, 1958, saw six circling overhead. From time to time, a muffled, almost corvine-like, "kar", repeated several times, was heard.

In 1957, R. I. G. Attwell found a colony of over 150 nests of *Ibis ibis* (Linné), together with a few of *Platalea alba* Scopoli and *Anastomus l. lamelligerus*, on the left bank of the Luangwa, at Nsefu, in *Acacia albida* trees. In early June the colony contained well grown young, and there were still a few young left in the last week of August. The 1955 colony of *I.ibis* and *P.alba* (see Check List, pp. 8, 9) was again occupied, by the former species only, in June, 1957, and there was yet another colony of *I.ibis* within six miles.

SYSTEMATIC LIST

Phalacrocorax africanus africanus (Gmelin).

Anhinga anhinga rufa (Lacepède & Daudin).

L.B.S. Estcourt reports a colony of thirty-eight nests of *P.africanus* from

the Musola River, Kasanka Game Reserve, 21st April, 1957. This was in a patch of riverine evergreen growth, the nests being between eight and twenty feet above water-level. Most of the nests contained either two or three young, though there may also have been eggs. The young were in all stages of development. Some, practically fledged, dropped into the water, two at least being taken by crocodiles, which were particularly numerous.

Six mixed colonies of *P. africanus* and *Anhinga* were observed by J. M. C. Uys between Meshiteshi and Namwala on the Kafue River, 14th April, 1958, mostly in *Acacia albida* trees. One colony was estimated to contain as many as 6,000 nests. Most of the *Anhinga* nests contained young, though those of *P. africanus* still contained mostly eggs.

Wedekind took a C/4 moderately incubated from a colony of twenty-five nests belonging only to *Anhinga*, in trees overhanging the Kafue River at 14°00'S., 27°21'E., on 28th June, 1957. The colony also contained young in all stages of development.

Phalacrocorax carbo lucidus (Lichtenstein).

Uys found a colony of seven nests all of this species, in trees on a rocky island in the Kafue River at 14°53'S., 26°12'E., 6th June, 1958. Three of the nests each contained two young almost fully fledged.

Ardea goliath Cretzschmar.

B. L. Mitchell reports two fledglings not fully grown on a sandbank in the Zambesi at 27°56'E., 18th August, 1957. He also saw a nest with two young almost fledged, 35ft. up in a *Tamarindus indicus* tree on an island in the Zambesi at 27°23'E., 22nd August, 1957.

Ephippiorhynchus senegalensis (Shaw).

Uys found a nest on Lochinvar Ranch, 20th May, 1957, at the top of a 15ft. high tree, *Albizia harveyi*, laced with a thorny vine, on an ant-hill on a grassy plain. The nest was made entirely of grass, and was about 3ft. wide, and almost flat. It contained a single chick not more than three weeks old, covered in white down, with bill not more than 3½ inches long, and horn in colour.

C. A. R. Savory, on the western side of the Mweru Marsh, on 11th May, 1957, saw an adult with building material in its bill, which it took to a nest in the top of a tree of *Euphorbia ingens*. The other bird of the pair was standing on the nest. It was not possible to inspect the nest, which a month later was still occupied.

Mitchell saw two adults with two fledged young on the Musa River, 19th June, 1958, and likewise the following day near the south-east corner of the Kafue National Park, though in this latter case there were four young. Uys saw three fledged young, with heads and necks still partly covered with white down, and under parental care, on the Nkala River three miles west of Ngoma (15°54'S., 25°58'E.), 2nd July, 1958, and four similar young the following day five miles east of Ngoma. Attwell saw two adults with three fledged young at Tembwe, Luangwa Valley, in July, 1950, and three young with down still adhering on the neck, in the Luangwa Valley in late June, 1952. None of these fledged young showed any red on the bill or legs, which were wholly black, while the areas which are black in adults were mainly dark grey, and those which are white were pale grey.

(to be continued)

Notices

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16th December.

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